

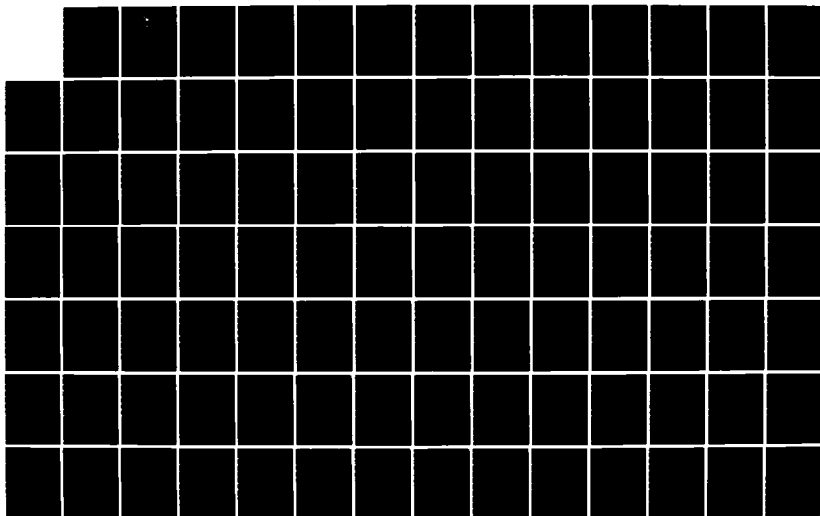
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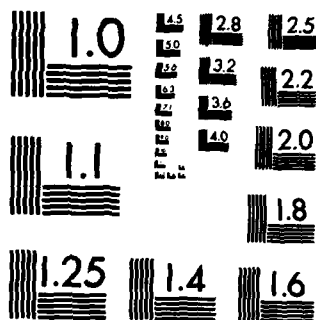
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AN EXAMINATION OF  
THE AIR FORCE CIVIL ENGINEERING'S  
PRIME BEEF HOME STATION TRAINING PROGRAM

THESIS

Emmitt G. Smith  
Captain, USAF

AFIT/GEM/LSM/84S-18

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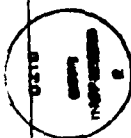
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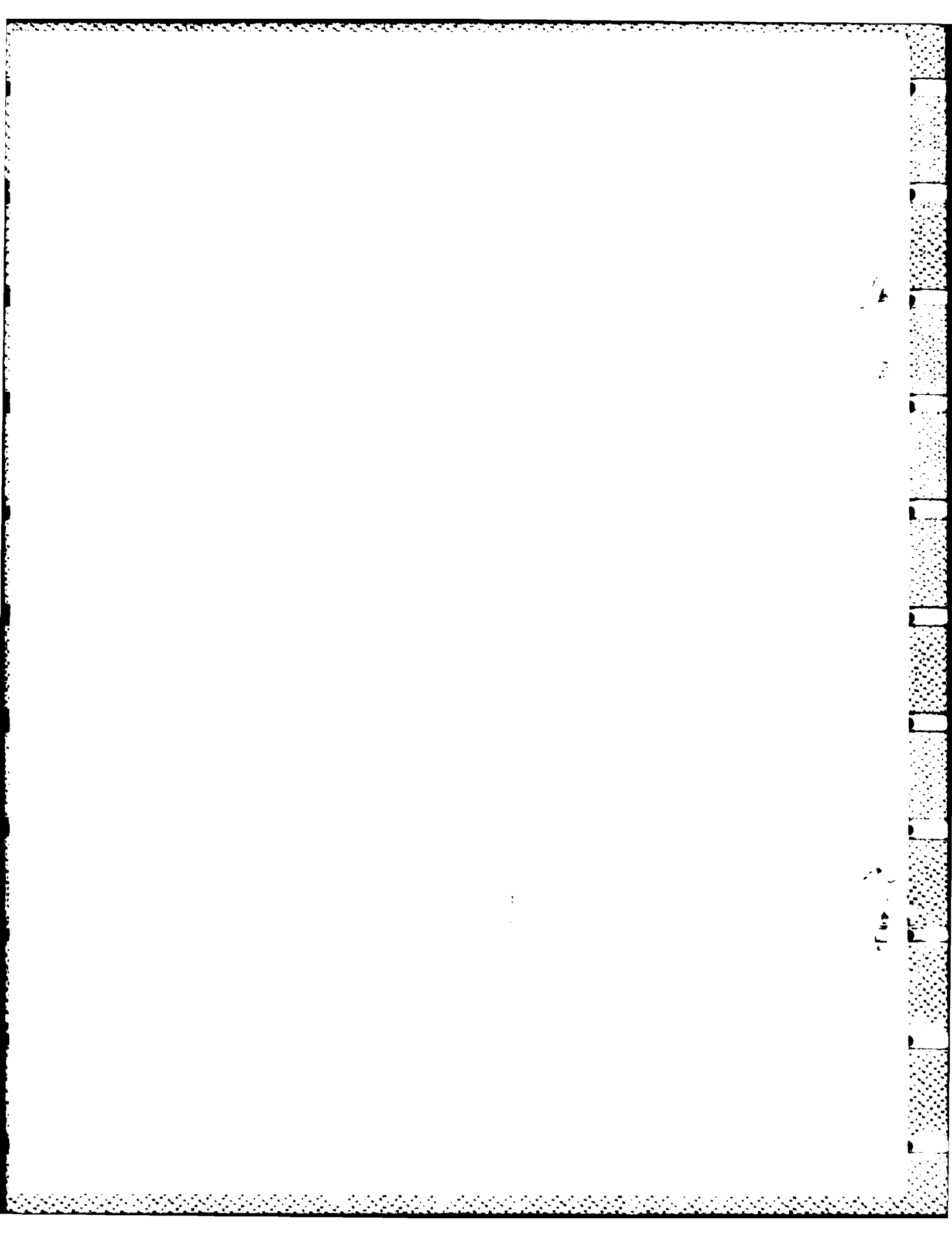
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AN EXAMINATION OF THE AIR FORCE CIVIL ENGINEERING'S  
PRIME BEEF HOME STATION TRAINING PROGRAM

THESIS

Presented to the Faculty of the School of Systems and Logistics  
of the Air Force Institute of Technology  
Air University  
In Partial Fulfillment of the  
Requirements for the Degree  
Master of Science in Engineering Management

Emmitt G. Smith, B.S.

Captain, USAF

September 1984

Approved for public release; distribution unlimited

## Preface

The format of this thesis differs from the standard Air Force Institute of Technology (AFIT) thesis format. The deviation in format was made because Chapter IV has five levels of headings and, with the AFIT standard format, this would have caused the last three levels of headings to be indented, respectively 5, 10, and 15 spaces, from the left margin of the page. To avoid possible confusion, the second level of headings, instead of beginning flushleft with the left margin of the page, was centered on the page. The third level of headings begins flushleft with the left margin of the page and the last two level of headings are indented respectively 5 and 10 spaces from the left margin of the page.

In writing this thesis I have had a great deal of help from others. I wish to thank Captain Jeff Thomas, my advisor, for his assistance, guidance, and patience on this project, and I wish to thank Dr. Richard Fenno, my thesis reader, for his timely comments and suggestions. A word of thanks must be given to Major Coleman for his help in performing the statistical analysis of the data. Finally, I wish to thank my wife, Lisa, for her help, patience, and tremendous support. Without her, completion of this thesis would not have been possible.

Enmitt G. Smith

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Abstract

This investigation examined the Air Force Civil Engineering's Prime BEEF Home Station training program. Specifically, this study determined the amount and methods of Prime BEEF Home Station training being conducted by CONUS and nonCONUS civil engineering units. Also, this study determined the amount of time civil engineering personnel spent in the field during their annual bivouac, and which organizations participate in or support the bivouacs. Furthermore, the study investigated the amount of equipment missing from Prime BEEF team equipment sets. Finally, a review of Air Force regulations, manuals, pamphlets, and reports, which pertain to Home Station training is presented.

The analysis was accomplished by sending a questionnaire to Prime BEEF program managers at all CONUS, AAC, and PACAF bases which had CF-1, CF-2, or CF-3 teams, and USAFE bases which had mobile or RRR teams. The results showed that a CONUS CF-1, CF-2, or CF-3 team member spent an average of 50.23 hours per year training (2.7% of an individual's potentially productive time) in the Home Station training requirements. Also, total annual training times varied widely between bases (from 13.34 hours per year to 393.00 hours per year) and between major Air Force commands (an average of 183.00 hours per year for AFLC to an average of 28.33 hours per year for AFSC). Finally, the results showed that the primary method of instruction used to accomplish Home Station training is "hands-on".

# AN EXAMINATION OF THE AIR FORCE CIVIL ENGINEERING'S PRIME BEEF HOME STATION TRAINING PROGRAM

## I. Introduction

### Overview

This chapter contains general background information on Air Force Civil Engineering wartime responsibilities and problems which exist in the civil engineering wartime training program. In addition, the specific problem investigated, the research objectives, research questions, the scope of the study, limitations, research assumptions, and definitions of frequently used terms are stated.

### Background

The mission of the United States Air Force is to prepare our forces to preserve the security and freedom of the United States [17:v].

One primary function of the Air Force is to "conduct prompt and sustained combat operations in the air to defeat enemy airpower" (17:2-1). Accomplishing this function requires launching, recovering, and supporting aircraft from air bases. Air bases (stationary platforms) are "the fixed asset system required to project aerospace power" (5:12). Fixed assets are "real estate, facilities, utilities, grounds and related equipment" (5:12).

During a war air bases may sustain battle damage which will limit or destroy the ability to launch, recover, or support aircraft. Repairing the battle damage and assisting in the defense of the base is

the wartime responsibility of Air Force Civil Engineers (12:5). Accomplishing the wartime mission of the civil engineers requires highly skilled personnel.

Civil engineering personnel acquire many of the needed wartime/contingency skills by performing the peacetime mission of air base maintenance (12:3). However, performance of the peacetime mission does not completely prepare engineering personnel to accomplish all wartime tasks (12:6). Examples of wartime tasks not practiced during the day-to-day mission of air base maintenance are rapid runway repair, repair of bomb damaged facilities, and explosive ordnance reconnaissance. Since the peacetime mission does not provide adequate training in all wartime skills, the Air Force directs civil engineering units, through the Prime BEEF (Base Engineer Emergency Force) Program, to conduct training in wartime skills at the base level. Prime BEEF is the program which organizes and prepares Air Force Civil Engineers for wartime/contingency operations. The training conducted at the base level is called Home Station Training (12:6).

Evidence exists that there are problems with the Home Station Training program. A 1980 AFIT thesis discovered that both CONUS and nonCONUS Civil Engineers believed the wartime training was not adequately preparing personnel for wartime task accomplishment (37:96). Two factors which contributed to this perceived inadequacy were a lack of equipment to train with (37:69, 94, 98) and a perception that the readiness mission was a lower priority than the peacetime maintenance mission (37:76, 78, 79, 95-97). Furthermore, a 1982 Air Force IG Report on Civil Engineering Readiness concluded that present base level wartime training was inadequate due to poor quality and a lack of realism

(28:3,4). In December 1982, two years after the AFIT thesis and approximately one year after the IG report were issued, a revised Prime BEEF regulation, AFR 93-3, was published. Also a draft Prime BEEF manager's handbook (AFP 93-7) containing guidance on how to fulfill the training requirements specified in AFR 93-3 was forwarded to the field during the first quarter of 1983. The revised AFR 93-3 and new AFP 93-7 were well received within the Civil Engineering community. Comments concerning AFP 93-7 have been especially positive (6).

Despite this new guidance, some civil engineering personnel still believe that the Home Station training program is not adequately preparing civil engineers, both officers and enlisted, to accomplish their wartime tasks. Problems most often cited are insufficient training time, inappropriate/inadequate methods of training, lack of equipment, and unqualified/inexperienced instructors (11,46,49). One Chief Master Sergeant civil engineer, who served two tours in Vietnam and four years at the Air Force Engineering and Services Center, stated the following:

The Air Force Civil Engineering organization is more concerned with the day to day mission of base maintenance than with preparing to fight the next war. Our training is not adequately preparing our troops to accomplish their wartime tasks. The training guidance provided by the Center, although improved recently, is inadequate. The civil engineering training program is affected too much by senior officers who never served in Vietnam or any other wartime/contingency scenario and do not fully understand what will be required of Air Force civil engineers during a war. Also, Air Staff "internal politics" have resulted in the establishment of a training program which requires insufficient training and places too much emphasis on base maintenance [46].

The Chief Master Sergeant's statement appears to be supported by the following statement made by Major Brian McCluskey, who was the Chief of Training Division for the Air Force Engineering and Services Center:



Our first priority (civil engineering) definitely is readiness, not our day to day job. However, in practice the peacetime mission is overshadowing the wartime requirements. To be effective the training program should be comprehensive and detailed. BCEs must be involved and committed for good training. More hands-on training is needed and an evaluation process should be implemented. The evaluation process should state measurable achievement levels or proficiency standards for which students could be assessed on. In order for the readiness program to succeed there must be full cooperation within and outside the civil engineering community. Involvement is necessary by Wing Center Commanders, MAJCOM commanders, and the MAJCOM staffs. Also, internal politics does impact the training mission. An example is the procedure by which new Prime BEEF training requirements are adopted. New training requirements are developed by the readiness section of AFESC. If the requirements are approved by the center then the requirements are forwarded to MAJCOM DEs to see if the requirements are acceptable. Acceptable means can the command afford to give up manhours from the maintenance mission to perform the training requirements. Now the struggle starts [39].

#### Specific Problem Statement

The present study is the first step in determining if Home Station Training is adequately preparing civil engineering personnel to accomplish their wartime tasks. The study determined the quantity of Home Station training civil engineering personnel receive annually and by what methods the Home Station training requirements of the Air Force Civil Engineering Prime BEEF program are being accomplished. Since training is impacted by equipment availability, the availability of team equipment was also investigated. Finally, comparisons between major commands; and between CONUS and nonCONUS commands were made in an effort to determine if nonCONUS commands train more for wartime tasks than do CONUS commands.

### Research Objectives

1. Determine for CONUS and nonCONUS bases the amount of time spent and the method of accomplishment for each area of Prime BEEF Home Station Training as specified in AFR 93-3.
2. Profile the differences in Home Station Training between CONUS and nonCONUS bases and between the major Air Force commands.
3. Determine for CONUS and nonCONUS bases the amount of team training equipment missing at the bases.

### Research Questions

To accomplish the research objectives, data will be collected to answer the following questions.

1. Annually, how much time does an individual at base level (CONUS) spend training in each of the following Home Station training requirements?

- a. Rapid Runway Repair
- b. Weapons
- c. Military sanitation
- d. Government vehicle operation
- e. Expedient repair methods
- f. Explosive ordnance reconnaissance
- g. Chemical warfare
- h. Personal, work party, and convoy security
- i. War Reserve Material field equipment
- j. Annual bivouac

2. What method of instruction is used to teach/conduct the following Home Station Training requirements (CONUS)?

- a. Rapid Runway Repair
- b. Weapons
- c. Military sanitation
- d. Government vehicle operation
- e. Expedient repair methods
- f. Explosive ordnance reconnaissance
- g. Chemical warfare
- h. Personal, work party, and convoy security
- i. War Reserve Material field equipment

3. Are the annual bivouacs conducted on or off base and which organizations participate in and/or support the bivouac?
4. What are the differences in Home Station Training between major CONUS Air Force commands?
5. What are the differences in Home Station Training between CONUS and nonCONUS commands?
6. How much team equipment is missing at CONUS and nonCONUS bases from the following team equipment sets:
  - a. Contingency Support Set
  - b. Home Station Training Set
  - c. CF-2 Team Kit
  - d. RRR Mini Kit

#### Scope of Study

This study will determine the amount and methods of Prime BEEF Home Station Training currently being conducted by CONUS and non-CONUS Civil Engineering Squadrons. Also, the study will determine the length of field training bivouacs being conducted at the base level and will determine which organizations participate in or support the bivouacs. Finally, the study will determine how much equipment is missing from Prime BEEF team equipment sets.

This study will not validate the methodologies used in previous studies or reports cited in this research and will not determine what amount of Home Station training is required for adequate training. Furthermore, this study will not present a complete literature review of the development of Prime BEEF as the history of Prime BEEF has been adequately documented (37:1-15; 42:18-20).

### Limitations

When evaluating the results of this study the following limitation should be considered.

1. Data was collected for CF-1, CF-2, and CF-3 teams from active duty Air Force Civil Engineering units only. Air Force Reserve and National Guard units were not examined.

2. The time frame for the data in this research was June 1983 to May 1984.

### Assumptions

Several major assumptions were made in this research concerning Prime BEEF training.

1. Respondents to questionnaires, including Prime BEEF managers, will provide truthful and accurate data.

2. Prime BEEF managers would be able to provide factual data since AFR 93-3 requires Prime BEEF managers to maintain individual and team training records (12:9).

### Definitions

The following, frequently used, terms are defined as follows:

#### Prime Base Engineer Emergency Force (BEEF)

"Civil engineering forces that prepare bases and recover them from war damage" (12:5).

#### Prime BEEF program

is an Air Force, major command, and base level program that organizes the civil engineering force for worldwide direct and indirect combat support roles [12:5].

### Home Station Training

The Prime BEEF training conducted at the base level to prepare civil engineering personnel for accomplishment of wartime tasks (12:6,15).

### Prime BEEF CF-1 Team

This mobile team is composed of 21 people primarily from pavements and grounds specialties. This highly skilled group of key personnel forms a nucleus for implementing Rapid Runway Repair (RRR) activities. In addition to that, they will assist members of a CF-2 team in Bomb Damage Repair (BDR) operation [37:109].

### Prime BEEF CF-2 Team

This mobile team is composed of 70 multi-skilled people necessary to conduct Bomb Damage Repair procedures immediately following hostile attack. While their primary duty is BDR, they supplement the manpower requirements of RRR [37:109].

### Prime BEEF CF-3 Team

This mobile team is trained and equipped to function as an engineering team. Its 35 people will normally supplement CF-1 and CF-2 teams; however, the team possesses the capability to develop, plan, and control damage repairs, and to operate, maintain, and construct facilities in support of base development [37:109].

### Continental United States (CONUS)

United States territory, including the adjacent territorial waters, located within the North American Continent between Canada and Mexico, excluding Alaska and Hawaii [12:29].

## II. Literature Review

### Overview

This chapter examines literature applicable to this research on Air Force Civil Engineering Home Station training. Specifically, the Air Force Civil Engineering mission, importance of training, organizational impact on training, Prime BEEF organization, and Prime BEEF training are discussed. Also, the Prime BEEF Home Station training requirements and recent evaluations of Home Station training are presented. Finally, Air Force training regulations, manuals, and pamphlets which pertain to Home Station training are reviewed.

### Air Force Civil Engineering

The following sections will review the Air Force Civil Engineering's wartime mission, organizational impacts upon wartime training, and the importance of training for the wartime mission.

#### Mission

The wartime mission of the Air Force requires the launch and recovery of aircraft, and high sortie generation. "Aircraft launch, recovery and sortie generation rates demand specific mission tasks from Air Force engineers" (27:4). These tasks were defined in the 1978 revision of the Department of Defense Directive 1315.6 as:

- a. Emergency repair of war damage to air bases.
- b. Force beddown of Air Force units and weapon systems excluding Army base development responsibilities.
- c. Operations and maintenance of Air Force facilities and installations.

- d. Crash rescue and fire suppression.
- e. Construction management of emergency repair of war damage and force beddown [28:6].

The new (1983) Air Force Civil Engineering mission which recognizes the above mission tasks states the following:

Air Force Civil Engineering Mission: Provide the necessary assets and skilled personnel to prepare and sustain global installations as stationary platforms for the projection of aerospace power in peace, and war [36:8].

Major General William Gilbert, a past Director of Engineering and Services, recognized the importance of civil engineering's wartime mission prior to the new mission statement and believed that the wartime mission was the justification for retaining military engineers (37:4). Furthermore, General Gilbert stated:

Military forces exist and can be justified only to the extent that they are required to respond to contingency operations in support of the national interest. As important as our other day-to-day jobs might be, they are secondary to preparedness for the conduct of military warfare. ...we will make the effort to recognize why military forces exist and what really is our first priority mission...support the combat forces [34:1].

Readiness is the primary mission of Air Force Civil Engineering (and that) each and every Base Civil Engineer should have readiness as his primary mission [37:3,4]

#### Importance of Training

Without adequate training, civil engineering personnel cannot perform their assigned wartime tasks. Inadequate performance by civil engineers directly impacts the potential for success of the Air Force's mission (27:15).

Recent Civil Engineering Documents. The Real Property Maintenance Activity Functional Review, which developed civil engineering's new mission statement in January 1983, identified eight

product areas which directly impact the mission statement. Product areas define Air Force civil engineering in terms of results, and one of the eight product areas was Ensure Readiness(5:15). The product area Ensure Readiness contains subproduct areas and tasks. One subproduct area under Ensure Readiness was "Train mil/civ (military/civilian) personnel to provide a state-of-readiness" (5:17). Two tasks associated with the above subproduct area are:

1. Develop training programs to ensure skills proficiency [5:17].
2. Accomplish training and monitor progress [5:17].

In addition to the emphasis that training receives in the civil engineering mission statement, the Air Force Engineering and Services Strategic Plan contains specific wartime training objectives. The Strategic Plan "provides milestones for the 1980's and a road map toward the year 2000[2:1]". Some of the specific wartime training objectives are (2:19,20):

1. Realistic rapid runway repair.
2. Security training.
3. Base recovery and assessment after an attack.
4. Home Station contingency training.

Air Force Leaders. The vital importance of wartime training to the successful accomplishment of the Air Force's mission is recognized by Air Force leaders. General Charles A. Gabriel, the USAF Chief of Staff, stated in a recent article that "aggressive and realistic training programs are vital in building an effective Air Force" (32:2). Similarly, Major General Clifton D. Wright, the Director of Engineering and Services, stated in a 1983 article:



...we must train our people to be ready for the wartime mission. We have to take the time out to practice the fundamentals of doing our job in wartime, and we must learn and become familiar with the equipment we use in wartime [52:6].

Finally, in December 1983 Brigadier General Joseph Ahearn, the Deputy Chief of Staff, Engineering and Services, U.S. Air Forces in Europe, stated in an interview that:

The only reason that we have uniformed military in civil engineering and services is to fulfill the wartime mission and that's what Prime BEEF and Prime RIBS training is all about - developing military skills [51:26].

### Organization

Civil engineering's organization directly impacts the training program. Shortly after the Department of Defense Directive 1315.6 was issued, the Air Force civil engineering community had to make a decision whether to reorganize into the form in which the next war would be fought or to retain the existing peacetime organization/manning levels and reorganize to meet any contingency. The decision was made to retain the existing peacetime structure (50). This decision to retain the peacetime organization and manning levels was based on what was best for peacetime base maintenance.

Civil engineering manning standards are based on peacetime needs. The civil engineering wartime requirement calls for a much different mix of civil engineering skills than exists for peacetime. Manning based on the expected wartime requirements would result in a majority of authorizations concentrated in a small number of civil engineering skills. This imbalanced manning would be unmanageable in peacetime and would not provide the flexibility needed in military-civilian mix nor provide an acceptable level of peacetime civil engineering support [12:5].

The peacetime organization of civil engineering may be responsible for a conflict between what is stated by Air Force leadership concerning

the importance of wartime training and the priority civil engineering wartime training is given at the base level. The 1980 AFIT thesis on Prime BEEF training, which was referenced in Chapter 1, determined that of five civil engineering manhour requirements Prime BEEF training had the lowest priority (37:95). Furthermore, the thesis stated "the accomplishment of the peacetime operations and maintenance mission appears to receive the highest priority in BCE (Base Civil Engineering) organizations" (37:95). The perception that the peacetime operation and maintenance mission is the highest priority still exists today (46).

#### Prime BEEF

Prime Base Engineer Emergency Force (BEEF) is the program which organizes and prepares Air Force civil engineers for wartime/contingency operations. The following sections will review Prime BEEF organization and training.

#### Organization

This section examines the Prime BEEF organization used by the continental United States (CONUS) commands, Alaskan Air Command (AAC), and the Pacific Air Force (PACAF) and the Prime BEEF organization used by U.S. Air Forces in Europe (USAFE). AFR 93-3 allows overseas commands to organize their Prime BEEF units "differently to meet particular theater requirements" (12:27).

CONUS, AAC, and PACAF. Prime BEEF organizes civil engineers into six types of engineering teams to accomplish various wartime tasks. During a war or contingency, Prime BEEF teams can be deployed to where

they are needed and can function as a separate unit or be integrated into an existing civil engineering organization (12:8,11). A brief description of the teams follows:

<u>Team</u>	<u>Number of Personnel</u>	<u>Title</u>
CF-1	21	Base Recovery & Operations Team
CF-2	70	Base Recovery & Operations Support Team
CF-3	35	Base Recovery & Operations Augmentation Team
CF-4	20	Command & Staff Augmentation Team
CF-5	12	Crash Rescue & Fire Suppression Operations Team
CF-6	3	Crash Rescue & Fire Suppression Control Team

A new Prime BEEF structure is being implemented in 1984. The new team structure was designed "to provide a flexible, task oriented concept for meeting peacetime, as well as wartime engineering requirements" (9:1). The proposed new Prime BEEF organization will create 26 types of teams to accomplish various wartime tasks (9:3,4)

<u>Team</u>	<u>Number of Personnel</u>	<u>Title</u>
PB-1	15	Engineer Management Team
PB-2	45	Basic Support Team
PB-3	20	Limited Support Team
PB-4	12	RRR Equipment Operator Team
PB-5	Reserved for future use	
PB-6	3	Fire Protection Management Team

PB-7	12	Fire Protection Operations Team
PB-8	3	Limited Fire Protection Operations Team
PB-9 through 26	3	Specialty Teams such as masons, carpenters, plumbers, etc

USAFE. USAFE's Prime BEEF teams are organized in accordance with USAFE's draft supplement 1 to AFR 93-3. The draft supplement became effective as guidance for USAFE bases on 15 September 1983 (33). The Prime BEEF teams, as specified by USAFE's supplement, are (29:5, 8, 9, 12, 13, 14, 15, 16):

<u>Number of Personnel</u>	<u>Title</u>
50	Mobile Team
91	Rapid Runway Repair Team
varies	Base Recovery and Operations Team
12	Mobile Crash Rescue/Fire Suppression Team
3	Mobile Crash Rescue/Fire Suppression Leadership Team
12	Aircraft Arresting Team
32	Harvest BARE Equipment Support Cadre

#### Training

Prime BEEF training is composed of three major parts (12:6,16):

1. Training obtained through the performance of the peacetime civil engineering work.
2. Specialized HQ AFESC training.
3. Home Station training.

Peacetime Civil Engineering Work. The peacetime civil engineering work of maintaining a base provides skill training in civil engineering AFSCs. These skills will be needed during a contingency to construct, operate, and repair facilities (12:6). This part of the Prime BEEF training provides the majority of all training received by civil engineering personnel and is the base upon which the other training parts build. However, the peacetime civil engineering work does not adequately train civil engineering personnel in all the tasks which civil engineers must perform during a wartime environment (12:6).

According to Major Harold Mashburn, a Marine engineer officer attending the Air Force Institute of Technology, the peacetime civil engineering work does produce airmen who are better craftsmen than their Marine or Army counterparts. The airmen are better craftsmen because they spend more time working in their specialty area and less time training in strictly wartime skill areas such as RRR or chemical defense (38)\*.

Specialized HQ AFESC Training. The specialized HQ AFESC training consists of instruction on how to recover a battle damaged base with emphasis on rapid runway repair and is conducted at Field 4, Eglin AFB, Florida for CONUS units. "The hands-on training includes repairing large and small pavement craters, EOR and CW defense techniques, overseas utility systems, installation and operation of Harvest Eagle equipment" (12:16). A deployment to Field 4 lasts five days, however the actual training time consists of three and one half days (3:3). Appendix A contains the training schedule. The desired training

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\* The author, who was an Army engineer officer for four year, concurs with Major Mashburn observations.

frequency for CF-1, CF-2, and CF-3 teams is once every 24 months (12:16).

Home Station Training. Home Station training is the training conducted at the base to prepare civil engineering personnel to accomplish their wartime tasks (12:15).

#### Home Station Training Requirements

According to Senior Master Sergeant David Bolin, a contingency force superintendent at the AFESC, in 1977 and 1978 he developed Home Station training requirements, which are the basis for today's requirements (7). The requirements developed in 1977 and 1978 were based upon the perceived wartime requirements, however the Instruction System Development (ISD) was not used. ISD is a process used by the Air Force to plan, develop, and manage training programs (20:1-1). ISD will be discussed in a later section. Training times and proficiency standards were not included in the 1977 and 1978 requirements as the requirements were viewed as refresher training to the training received at Field 4, Eglin AFB and because civil engineering organizations did not get credit, productive manhours credit, for Prime BEEF training.

Air Force Regulation 93-3 lists the current home station training requirements for Prime BEEF teams, and AFR 93-7 provides additional guidance. The training requirements in the current AFR 93-3 were adopted with some changes from the 1979 AFR 93-3. A discussion of the Home Station training requirements in the following categories will be presented (12:15,16):

1. Rapid runway repair
2. Weapons
3. Military sanitation.
4. Government vehicle operations

5. Expedient repair methods
6. Explosive ordnance reconnaissance
7. Chemical warfare
- \*8. Personal, work party, and convoy security
- \*9. War Reserve Material field equipment
10. Annual Bivouac

Only CF-1, CF-2, and CF-3 teams and USAFE Mobile teams train in all ten categories.

Throughout the following sections, a Prime BEEF curriculum workshop report and alphanumeric proficiency codes are cited. The workshop was conducted by the AFESC. Prime BEEF personnel from across the Air Force assembled at the AFESC and based on their experience and knowledge developed recommended training times and proficiency standards for wartime training. Two facts must be stressed; 1) the training times and proficiency standards are only recommendations and 2) the training times and proficiency standards are based on the subjective opinions of the workshop's participant (39). The proficiency code key from AFM 50-62, "Handbook for Air Force Instructors," (18:3-4) is contained in Appendix B.

#### Rapid Runway Repair

AFR 93-3 requires Prime BEEF team members to receive annual training in RRR. The amount of training hours is not specified and neither is a proficiency standard which should be met (12:15). The regulation does state that hands on training should be used "to the greatest extent possible, using the mini-kit, and other available resources" (12:15). Rapid Runway Repair mini-kits consist of AM-2

- \* AFR 93-3 lists Field training as a Home Station Training requirement. Field training is not listed in the ten categories of training to be reviewed because it was separated into two areas for a more thorough coverage of the material. The two areas are Personal, Work Party, and Convoy Security training and War Reserve Material field equipment training.

aluminum runway repair matting and accessories which can be used to practice repairing bomb damaged runways (12:18).

AFP 93-7 suggests the RRR training be broken into two phases. Phase I would be the classroom portion of the training, while Phase II would be "devoted to the "hands-on" approach using a RRR "mini-patch" kit" (27:16). Similar to AFR 93-3, AFP 93-7 does not specify how many hours of training should be conducted or proficiency standards which should be met. However, AFP 93-7 does contain a sample RRR lesson plan which specifies measurable "Samples of Behavior". These Samples of Behavior are:

Each student should be able to:

- a. State reasons for rapid runway repair.
- b. Identify parts of a rapid runway repair kit.
- c. Identify support equipment needed to repair a damaged runway.
- d. Describe criterion (criteria) developed for successful implementation of rapid runway repair operations.
- e. Explain the method and procedures necessary to expedite repair of bomb damaged runways [27:71].

The Samples of Behavior do not require personnel to demonstrate proficiency in RRR. The lesson plan also contains the following main points, which seem to be more specific as far as the performance of team members.

- a. Know reasons for current method of expedient runway repair.
- b. Know parts, equipment, and criterion (criteria) developed for rapid runway repair operations.
- c. Know methods and procedures necessary to expedite repair of bomb damaged runways using AM-2 matting installed by CF-1 and CF-2 teams.
- d. Know how to perform as an integral member of a rapid runway repair team [27:71]

Main point (d) requires personnel to "know how to perform". However, a proficiency standard is not stated.



Both AFR 93-3 and AFP 93-7 reference AFR 93-2, "Base Recovery Plan", as the primary source of information for RRR information (12:15; 27:16). AFR 93-2 states that the number one task of the Base Civil Engineer during war is to insure the availability of facilities with which to generate aircraft sorties. After an enemy attack, repair of the runway is the highest priority for the civil engineer. To accomplish the repairs requires trained personnel (15:4-1). "All BCE personnel and selected augmentees assigned to a RRR team must be trained to meet RRR goals" (15:4-2).

AFR 93-2 does establish training goals (proficiency), minimum training requirements, and capability exercises for personnel assigned to RRR teams. The training goal is for the RRR team to be able to repair three craters within four hours. RRR team minimum training requirements are 1) quarterly training that is as, 2) realistic as possible, and includes 3) at least one simulated bomb crater. Furthermore, the RRR teams must perform a RRR capability exercise twice a year, with one of the exercises conducted during the night (15:4-2).

A 1983 Prime BEEF training curriculum workshop, conducted by the AFESC, recommended that only theater tasked RRR teams be trained at Field 4 of Eglin AFB, and that the rest should receive their "contingency training through the updated HS (home station) program" (4:14). Furthermore, the workshop recommended RRR training/frequency and proficiency standards, but only for teams being trained at field 4, Eglin AFB. No training time requirements or proficiency standards were established for Home Station training (4:a2).

## Weapons

AFR 93-3 requires team members to demonstrate annually "minimum marksmanship proficiency as outlined in AFR 50-57" (12:15). Enlisted team members fire the M-16 rifle, while officers qualify with the .38 caliber revolver. In addition to requiring team members to annually demonstrate minimum marksmanship proficiency, team members must also train in the care and cleaning of the weapon (12:15).

AFR 50-36, Volumes I and II, "Combat Arms Training and Maintenance Program Management", superseded AFR 50-57, "Small Arms Marksmanship Training", on 15 March 1984. AFR 50-36, Volume II, establishes training goals, training objectives, training time requirements, and proficiency/qualification standards. The training goal is:

is to instill, develop, and maintain in the trainee the confidence and ability to successfully engage, either as an individual or a member of a unit, enemy targets within the range and capabilities of the M-16 rifle. [16:21].

The regulation contains fifteen objectives which cover the complete spectrum of weapon operation (16:21). The fifteen objectives are contained in Appendix C.

Weapons training is divided into four parts: orientation, initial qualification, recurring qualification, and remedial training. Personnel who enter the Air Force through Basic Military Training, Air Force Academy, Reserve Officers Training Corps, and Officers Training School receive Orientation Training. This training introduces an individual to weapons and marksmanship techniques but "does not qualify the individual for armed duty" (16:4). An individual receives initial, recurring, and remedial weapons training if he is in one of the following two groups:

Group A are those personnel who are armed daily in the performance of their normal duties or who have a high potential for ground combat [16:4].

Group B are those personnel who are not armed daily but have either a possible combat commitment or are occasionally armed in the course of their duties [16:4,5]

Prime BEEF team members are in group B. As group B members, Prime BEEF personnel receive initial, recurring and remedial training. The initial training on the M16 rifle lasts for eight hours (16:21) and is "designed to provide an individual with the knowledge and skills necessary to meet the qualification standards" (16:4). Recurring weapons training is similar to the initial training but is designed to maintain an individual's proficiency. Prime BEEF enlisted personnel must qualify annually on the M16 rifle through recurring training unless they achieve an expert qualification status. If an expert qualification status is achieved, the individual needs to attend recurring training only every two years (16:5,7).

AFR 50-36 states two different training times for recurring rifle training. Paragraph 3-2 states the recurring rifle training time is six hours (16:21). However, paragraph 3-5 divides recurring training into four periods which last a total of five and one quarter hours. The first period lasts two hours and consists of learning the basic operation of the weapon. The second period lasts one and one quarter hours and teaches the individual marksmanship techniques. The third period is forty-five minutes long and is a live fire practice. The final period is one and one-quarter hours long and is the qualification live fire (16:21,22,23). Appendix D contains the detailed information on the qualification live fire. Remedial training is for personnel who do not qualify during the recurring training (16:6).

Captain James A. Thomas III, assigned to Headquarters AFLC, was contacted concerning the recurring training time discrepancy in AFR 50-36 (54). Captain Thomas contacted Major James Hunter of HQ, AFOSP/SPOT, the organization which wrote the regulation, and requested information concerning the discrepancy. The information Captain Thomas received is that the discrepancy has no impact on training and that units at the base level responsible for teaching the course have the flexibility to teach either five and one quarter hours or six hours.

Captain Thomas also was asked about an "apparent contradiction" in AFR 50-36. The training goal states that personnel should learn about the range and capabilities of the M16 rifle (16:21) which fires 5.56mm ammunition; however, the regulation also states that .22-caliber ammunition will be used instead of the 5.56mm caliber ammunition where units have conversion kits (16:25). Captain Thomas stated that this was a controversial subject, which was being debated within the security police community, because firing the .22-caliber ammunition did not duplicate the range and capabilities of 5.56mm ammunition. The main reason for using .22-caliber ammunition was that it saves the Air Force money (54).

The Prime BEEF training curriculum workshop recommended another training time and proficiency standard. The training time was four hours and the proficiency standard was "3C" (4:a2), which means an individual:

1. Can do all parts of the task.
2. Needs only a spot check of completed work.
3. Meets minimum local demands for speed and accuracy. (COMPETENT).
4. Can analyze facts and principles and draw conclusions about the subject. (ANALYSIS) [18:3-4].

### Military Sanitation

AFR 93-3 requires team members to train annually in military sanitation in accordance with AFM 161-10 and AFR 50-20 (12:15). AFR 93-7 references AFR 50-6 as another publication which can be used as a reference (27:17). Neither AFR 93-3 or AFR 93-7 specifies minimum training times nor a proficiency standard which should be met. AFR 93-3 does state:

Base medical personnel provide the training which includes: personal hygiene, control of communicable diseases, kitchen and mess sanitation, problems of extreme climate, march hygiene, self aid and buddy care, water purification and other related topics [12:15].

AFR 160-25(C1), "Medical Readiness Planning", was not referenced by AFR 93-3 or AFR 93-7; however, it states that medical units "will assist the line in providing this training (self aid and buddy care)" (22:7-4). Assistance will include training for nonmedical instructors, proving (providing) technical assistance, and in some cases, providing the training.

AFM 161-10, "Field Hygiene and Sanitation", provides information on established, practical matters to preserve health and prevent disease (23:10). The manual does not contain recommended training times or proficiency standards.

AFR 50-20, "Self Aid and Buddy Care," states that the personnel to be trained are "personnel selected for overseas assignment (26:1)", and personnel on mobility teams which could be deployed overseas (50-20:1). The objective of self aid and buddy care is:

is to provide basic life-and-limb saving training to enable all personnel to survive until medical personnel are available to continue care [26:1].

AFR 50-20 does not contain minimum training times or standards, however attachment 1 of AFR 50-1, "Ancillary Training Program", references AFR 50-20 and states that the training times are "annual; 4 hrs initial and 2 hrs refresher every 3 years (14:11)."

The 1983 Prime BEEF curriculum workshop did establish training frequency and proficiency standards for military sanitation training. Their recommended training time was one to two hours per year with one hour classroom and one hour practical exercise. The recommended proficiency standard was "2C" (4:a1), which means an individual:

1. Can do most parts of the task.
2. Needs help only on hardest parts.
3. May not meet local demands for speed or accuracy. (Partially Proficient).
4. Can analyze facts and principles and draw conclusions about the subject. (ANALYSIS) [18:3-4].

#### Government Vehicle Operations

AFR 93-3 requires all team members to have a valid drivers license and to know how to operate vehicles identified in their individual Air Force Skill Codes, provided the vehicles are available at their base. The regulation also recommends borrowing vehicles from sister service organizations such as the Army, National Guard and Reserves to obtain vehicles to train on. AFR 93-3 does not state a minimum training requirement or require annual training; however, the qualification (driver's license) requirement is a proficiency standard (12:15,16). AFP 93-3 contains a recommended list of vehicles which each AFSC should be qualified to operate (27:39). Figure 2-1 contains the list from AFP 93-7.

AIR FORCE SPECIALTY CODE	AIR FORCE SPECIALTY	CARGO TRUCKS	DUMP TRUCKS	TRACTOR & TRAILERS	FORKLIFTS	FRONT-END LOADERS	DOZERS	FUEL TRUCKS	ELECTRICAL LINE TRUCKS	INDUSTRIAL TRACTORS & ATCH.	ROLLERS	DISTRIBUTORS (water & asph.)	GRADERS	CRANES	SWEEPERS	TRENCHERS	STATION WAGONS
542X0	Interior Electric	X		X				X									
542X1	Exterior Electric	X		X				X									
542X2	Power Production	X	X	X			X										
545X0	Refrigeration	X	X	X	X												
545X1	Liquid Fuels	X		X			X										
545X2	Heating	X	X	X			X	X							X		
545X3	Control System	X	X	X	X												
551X0	Pavements	X	X	X	X	X			X	X	X						
551X1	Equipment Operator	X	X	X	X	X	X		X	X	X	X	X	X	X		
552X0	Carpenter	X	X	X	X												
552X1	Masonry	X	X	X	X	X											
55273	Structural	X	X	X	X	X											
552X2	Metal Fabrication	X	X	X	X												
552X5	Plumber	X	X	X				X							X		
553X0	Site Developer	X	X	X	X												
555X0	Production Control	X														X	
566X0	Entomology	X		X				X	X								
566X1	Environmental	X	X	X				X									

Figure 2-1. Vehicle Operation Per AFSC

The 1983 Prime BEEF training curriculum workshop recommended two phases of vehicle training, training times and a proficiency standard (4:a1). The phase I training would be required of all personnel. Phase I recommended training time is one hour per year on General Purpose vehicles up to one and one-half ton trucks. Phase I proficiency standard is "2C", which means an individual:

1. Can do most parts of the task.
2. Needs help only on hardest parts.
3. May not meet local demands for speed or accuracy. (Partially Proficient).
4. Can analyze facts and principles and draw conclusions about the subject. (ANALYSIS) [18:3-4].

The Phase II training would only be required by RRR team members, particularly the heavy equipment operators. Phase II training would be conducted at the Home Station and at Technical Training Centers with the recommended training time of eight hours per year. The report did state how the training would be divided between Home Station and the Technical Training Center. The recommended proficiency standard for Phase II is the same as Phase I "2C" (4:a1).

#### Expedient Repair Methods

AFR 93-3 requires annual training in expedient repair methods which would be used in remote locations or on battle damaged facilities to restore operational capabilities. AFR 93-3 states: "A great deal of simulation will be necessary in this type annual training" (12:16). The regulation does not state a minimum training time or a proficiency standard which should be met.

AFP 93-7 provides expanded guidance on how to conduct the training but also does not state a minimum training time or a proficiency standard (27:17). The pamphlet does provide a suggested lesson plan



which lists the following "Measurable Samples of Behavior" which should be present after trainings:

Each student should be able to:

- a. Describe different types of landing mats used for expedient runways.
- b. Describe different techniques of developing underground water.
- c. Name different methods of constructing expedient revetments.
- d. Select several types of materials that can be used as pavement patching materials.
- e. State which utilities would have the highest repair priority.
- f. Identify emergency function of certain base facilities during times of hostilities [27:78].

The 1983 Prime BEEF training curriculum workshop divided expedient methods into three areas and established training times and proficiency standards for each area (4:a1). The three areas were Beddown, Construction Techniques, and Repair Techniques. Beddown deals with Harvest Eagle/Bare assets which are War Reserve Material. Recommended Beddown training time and proficiency standard are one hour per year and "B". Construction Techniques deal with non-War Reserve Material assets. Recommended Construction Techniques training time and proficiency standard are one hour per year and "B". The last area, Repair Techniques, deals with innovative techniques which would be used by each AFSC. The recommended training time is one hour per year and the proficiency standard is "B". Proficiency standard "B" means that an individual "can explain relationship of basic facts and state general principles about the subject (PRINCIPLES)" (18:3-4).

#### Explosive Ordnance Reconnaissance

AFR 93-3 requires that team members receive annual training in explosive ordnance reconnaissance (12:16). The regulation does not

specify a minimum training time; however it does state the following, which can be interpreted as a proficiency standard.

Therefore, Prime BEEF personnel must be able to recognize and describe unexploded ordnance, estimated distances to predetermined coordinates and report it to the explosive ordnance disposal (EOD) team [12:16].

AFP 93-7 provides additional guidance on explosive ordnance reconnaissance and suggests having EOD personnel conduct the training (27:17). In addition, the pamphlet contains a suggested lesson plan which has the following Measurable Samples of Behavior:

Each student should be able to:

- a. List explosive identification features.
- b. Describe the verification procedures for buried unexploded ordnance.
- c. State precautions which must be used at an unexploded ordnance site.
- d. Describe procedures for reporting unexploded ordnance.
- e. Describe procedures for protective measures and works associated with UXOs [27:85].

Neither AFR 93-3 nor AFP 93-7 referenced AFR 355-1 for explosive ordnance training; however AFR 355-1 states that personnel in or who may deploy to high threat areas will receive training in this subject (25:55). AFR 355-1 does not state a minimum training time nor a proficiency standard.

Attachment 1 of AFR 50-1, "Ancillary Training Program", states that "all base military personnel overseas and CONUS personnel assigned to mobility positions" (14:10) are to receive explosive ordnance reconnaissance orientation in conjunction with chemical warfare defense training. The stated training time is eleven minutes (14:10). The Ancillary training program will be discussed in detail in a later section.

The 1983 Prime BEEF training curriculum workshop divided explosive ordnance reconnaissance into two phases (4:a1). Phase 1 is the only

phase which would be conducted at the home station. The recommended training time and proficiency standard for Phase I are one hour per year and "B", which means an individual "can explain relationship of basic facts and state general principles about the subject (PRINCIPLES)" (18:3-4).

#### Chemical Warfare

AFR 93-3 states that chemical warfare training will be conducted in accordance with AFR 355-1 "Disaster Preparedness: Planning and Operations" (12:16) and that:

it is imperative for Prime BEEF members to know what actions to take to survive a toxic chemical agent attack and how to effectively use their CW (chemical warfare) equipment. CW training should include learning to recognize the symptoms of chemical agents; donning, wearing and removing of personal protective equipment; performing normal duty tasks in CW protective equipment and clothing, knowing the limitations of protective gear; and familiarity with decontamination procedures [12:16].

AFP 93-7 also refers to AFR 355-1 and states that the Disaster Preparedness personnel will conduct the initial and recurring chemical warfare training. Furthermore, the pamphlet states that task qualification training is the unit's responsibility to conduct on an annual basis (27:17).

AFR 355-1 establishes minimum training requirements and proficiency standards for categories of personnel according to their duties or area of assignment. "Personnel located in and those who have been identified to deploy into and operate in high threat areas (HTAs) will be trained to at least the minimum Air Force chemical warfare (CW) and conventional defense proficiency standards listed in attachment 4, course 8" (25:53). Appendix B contains attachment 4, and the contents of course (rule) 8 are contained in Appendix E. Since Prime BEEF personnel are located in

or identified for deployment into high threat areas they receive initial orientation, refresher, and task qualification training (25:54).

Initial and refresher training is conducted by Disaster Preparedness personnel. Course (rule) 8 states that initial training consists of four hours of classroom training and a mask confidence exercise. Refresher training, which is conducted annually, consists of two hours of classroom training (25:54,55). Proficiency levels of personnel in the initial and refresher training "is determined through written test, workbook exercises, or demonstration tests" (25:54).

Task qualification training is conducted by civil engineering units and must be held every twelve months. Preferably, the training "should be scheduled so as to complement refresher training to ensure that individuals attend refresher or task qualification training at least once every 6 months" (25:54). Task qualification training is where personnel must wear their chemical warfare protective clothing while performing their wartime tasks. AFR 355-1 does not state how long TQT should last or a proficiency level.

The 1983 Prime BEEF training curriculum workshop divided chemical warfare training into two parts: individual protection and collective protection (4:a1). Training times and proficiency standards were established for each part. For individual protection, the training time was four hours per year and the proficiency was "3C" which means an individual:

1. Can do all parts of the task.
2. Needs only a spot check of completed work.
3. Meets minimum local demands for speed and accuracy (COMPETENT).
4. Can analyze facts and principles and draw conclusions about the subject. (ANALYSIS) [18:3-4].

Collective protection was to be taught at a Technical Training Center

and at the home station. The training conducted at the home station was to consist of sixteen hours per year and a proficiency level of "3C" (4:a1). The workshop report does not state whether its training times and proficiency levels are consistent with AFR 355-1.

#### Personal, Work Party and Convoy Security

AFR 93-3 requires team members to train annually in personal, work party, and convoy security training (12:16). Neither a minimum training time nor a proficiency level is stated. This training is subdivided into two phases. Phase I is the classroom portion and Phase II is the hands-on application performed during the annual bivouac (12:16).

AFP 93-7 states that security police should assist in the security training. Furthermore, the pamphlet specifies that the training should concentrate on defensive measures. However, neither training times nor proficiency levels are presented (27:18).

The 1983 Prime BEEF training curriculum workshop is consistent with AFR 93-3 and AFP 93-7 as it separated security training into two phases. The training time for Phase I is one hour per year and the proficiency level is "B" (4:a2), which means an individual "can explain (the) relationship of basic facts and state general principles about the subject (PRINCIPLES)" (18:3-4). Phase II training time is four hours per year and the proficiency level is "3C" (4:ap), which means an individual:

1. Can do all parts of the task.
2. Needs only a spot check of completed work.
3. Meets minimum local demands for speed and accuracy. (COMPETENT).
4. Can analyze facts and principles and draw conclusions about the subject. (ANALYSIS) (18:3-4).

A draft "Concept of Operations for Prime BEEF Team Operations within the Air Base Ground Defense Area of Operations" dated 14 March

1984 addresses security training for civil engineering personnel. The document reviews civil engineering activities during the pre-attack phase and the post-attack phase (1:2-9). Furthermore, the document lists specific training requirements (Appendix F) for civil engineering personnel (1:14-18). Minimum training times are not established. Instead, performance standards are stated and the document says:

Under all circumstances the students should be evaluated in the actual performance or demonstration of the lessons learned if at all possible. If not possible for field evaluation, student evaluation can be accomplished through written tests. At the conclusion of evaluation for each class students for remedial training should be identified [1:17,18].

The training requirements would be incorporated in AFR 93-3 (1:18).

#### War Reserve Material Field Equipment

AFR 93-3 requires team members to train annually in the layout, erection, and maintenance of war reserve material (WRM) field equipment.

WRM is material needed in addition to peacetime assets to support the wartime activity stated in HQ USAF approved plans and programs. Examples of WRM are Harvest Bare and Harvest Eagle assets [12:31].

Harvest Bare and Harvest Eagle assets are essential items of equipment used to support deployed forces at bare (undeveloped) bases (12:29). Training time and proficiency level are not specified (12:16). Since most bases do not have Harvest Bare and Harvest Eagle assets, this training will usually be conducted with "briefings, sound-on-slide presentations and 16mm films" (27:18).

The Prime BEEF training curriculum workshop did not address WRM field equipment training as a separate topic. However, the beddown of Harvest Bare and Harvest Eagle assets is included under the expedient

methods topic. The beddown training time requirement was one hour per year and the proficiency level was "B" (4:a1), which means an individual "can explain (the) relationship of basic facts and state general principles about the subject" (18:3-4).

#### Annual Bivouac

AFR 93-3 requires an annual overnight bivouac "where all of the above listed training would be put into practice" (12:16). The bivouac can be held on or off the base (12:16).

#### Evaluations of Home Station Training

Since 1980 two evaluations of Prime BEEF training have been conducted. One evaluation was an Air Force Institute of Technology thesis and the other was a Functional Management Inspection of civil engineering readiness performed by the Inspector General. These two reports will be reviewed in the following sections.

#### Thesis

A 1980 Air Force Institute of Technology (AFIT) thesis on Prime BEEF training concluded that the training requirements in the August 1979 AFR 93-3 did not result in adequate or realistic training (37:89). In addition, the thesis stated that support of the Prime BEEF program by major commands needed improvement, that realistic training was hampered by inadequate tools and equipment, and that training time was not sufficient to complete all required Prime BEEF training requirements (37:94). However, the thesis did find that base level agencies support was adequate, and that training manhours were made available when needed

(37:94). Finally, the thesis found that the order of importance of the Home Station training requirements, ranked from most to least important, were (37:92):

1. Rapid Runway Repair.
2. Chemical warfare defense training.
3. Field training.
4. Expedient training.
5. Weapons training.
6. Explosive ordnance reconnaissance training.
7. Military sanitation training.
8. Training in government vehicle operation.

The thesis "was based solely upon the personal opinions of Air Force Civil Engineering personnel" (37:89). Mail surveys were sent to CONUS Base Civil Engineers, Chief of Operations, and Prime BEEF Managers of the 81 bases which had CF-1, CF-2, and CF-3 teams; and to 38 nonCONUS Base Civil Engineers (37:21). The CONUS surveys obtained information on ongoing training, while the nonCONUS surveys obtained data on the Prime BEEF teams wartime tasks(37:23).

#### Functional Management Inspection

An Air Force IG Functional Management Inspection of Civil Engineering Contingency Readiness conducted from 2 February 1981 to 8 January 1982 revealed major training shortfalls. As part of the inspection the IG visited fifteen bases, four REDHORSE squadrons, six major commands, the Engineering and Services Center, the Air Staff, the National Guard Bureau, and Headquarters, Air Force Reserve (28:1). The inspection report stated:

The Prime BEEF Home Station training program was not fully preparing Prime BEEF units for their wartime role due to varying quality and lack of realism [28:16].)

Also, the report made several recommendations which were included in the 22 December 1982 revised AFR 93-3. The recommendations were (28:17):



1. Emphasize first aid/buddy care as part of home station training.
2. Establish annual overnight bivouacs as part of field training.
3. Emphasize hands-on training over classroom instruction.

### Air Force Training Programs and Policies

The Air Force has over fifty regulations, manuals, and pamphlets which address training (24:24,25). This section will review the regulations, manuals, and pamphlets which relate to Air Force Civil Engineering Home Station training. Specifically, the Air Force Ancillary Training Program, the Instructional System Development Program, and Air Force methods of instruction will be presented.

#### Ancillary Training Program

The Ancillary Training program (ATP) as defined in AFR 50-1:

Refers to training in subjects required of Air Force personnel but which are separate from the individual's primary Air Force Specialty (AFS). It includes training in those subjects not identified in the individual's military AFS description contained in either AFRs 36-1 and 39-1... [14:2].

AFRs 36-1 and 39-1 specify the duties of officer and airmen Air Force Specialty Codes (AFSC). A review of the airmen's AFSCs for carpentry specialist, construction equipment technician, masonry specialist, metal fabricating technician, protective coating technician, and pest management technician was made. The duties of each AFSC as listed in AFR 39-1, "Airman Classification", relate strictly to knowledge of each particular craft skill and to supervision (13:A29-9, 17, 19, 21, 22, 25, 29, 30, A30-5, 6). The duties did not include specific wartime skills such as rapid runway repair, chemical warfare

defense, and the other wartime skills as stated in AFR 93-3, the Prime BEEF regulation (12:16). Therefore, in accordance with AFR 50-1, Prime BEEF Home Station training requirements are ancillary training.

The ancillary training policy states that each directing agency, both at the Air Staff and at the MAJCOM level, will use the Instructional System Development (ISD) when planning, developing, or changing an ancillary training program (ISD will be explained in greater detail in the next section). The directing agency is the organization which is responsible for a particular ancillary training course (14:2), and the Air Force Engineering and Services Center (AFSC) is responsible for Home Station training requirements (12:8,15). This policy requires each directing agency to:

- a. Make sure that sufficient duty performance needs and target population analysis are accomplished and documented to identify valid training needs [14:2].
- b. Develop measures to validate the training effectiveness of the course [14:2].
- c. Design ancillary training courses to meet specific training needs [14:2].
- d. Develop courses to give personnel the required knowledge in minimum time and at minimum cost [14:2].

Ancillary training will be documented with AF Form 991 "or in an approved automated system" (14:4). Civil Engineer units can use BEAMS to document the training, and if BEAMS is not available AFR 93-3 requires the use of AF Form 1098 to document training (12:15). Therefore, AFR 50-1 and AFR 93-3 differ on which form to use in documenting training.

Attachment 1 of AFR 50-1 lists the approved ancillary training programs, reference documents, office of primary responsibility,

training and frequency durations, and the training target group. The attachment contains a note which states the the training durations are recommendations and that the training can be "conducted in less than recommended times if objectives can be met" (14:7). The ATPs listed in AFR 50-1's attachment 1 which pertain to Prime BEEF Home Station training are:

1. M16 Rifle (14:10)
2. Explosive Ordnance Reconnaissance Orientation (14:10)
3. Self-Aid and Buddy Care (14:11)
4. Chemical Warfare Defense for High Threat Areas (14:13)
5. Government Vehicle Operator Classroom Training (14:7)]

Appendix B lists the above ATPs in an expanded format with information from attachment 1 of AFR 50-1.

AFR 93-3 does not reference AFR 50-1 or the Ancillary Training Program, and AFR 50-1 does not list several of the Home Station training requirements such as rapid runway repair or security training. Major Brian McCluskey, the Chief of Training Division at Headquarters, AFESC/DEOT, stated that it was an "omission because of a lack of knowledge of the (ancillary training) program" (39).

#### Instructional System Development

Instructional System development (ISD) "is a systematic but flexible process used to plan, develop, and manage education and training programs" (21:1). ISD produces cost-effective and efficient training (20:1-1). The ISD process consists of five steps which are shown below, and the ISD model, which illustrates the five steps, is shown in figure 2-2.

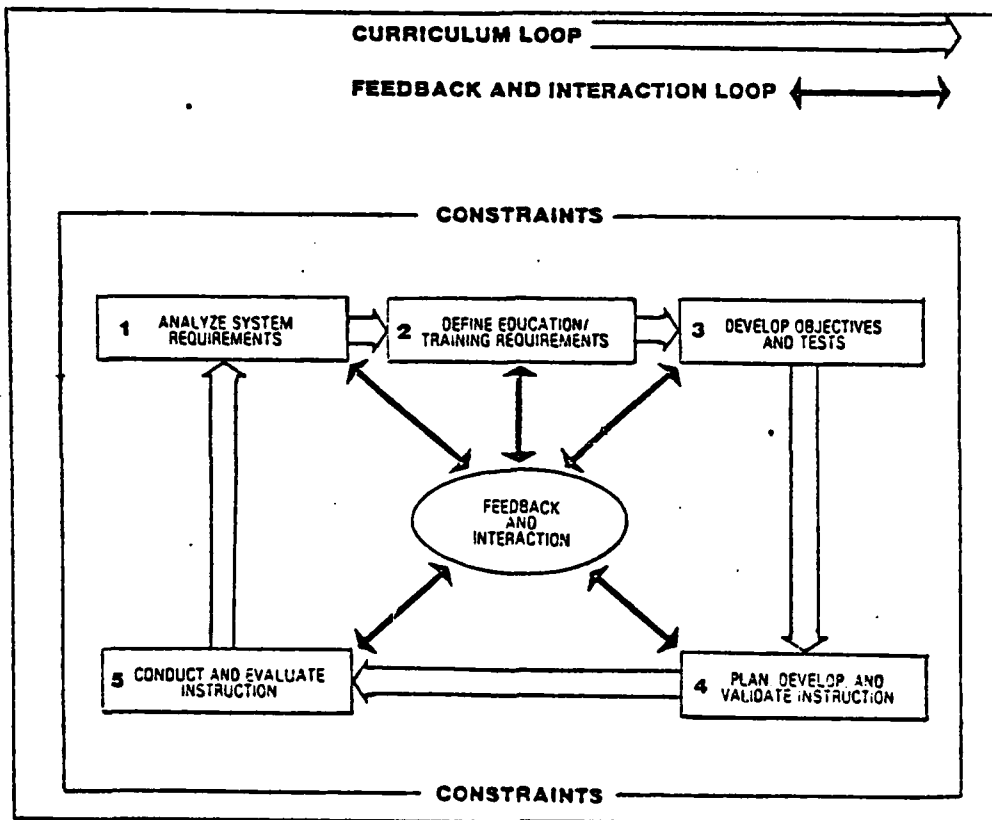


Figure 2-2. ISD Model

(1) ANALYZE SYSTEM REQUIREMENTS: "Determining precisely what the skilled performer does when doing the job, how well he or she must do it, and under what conditions" (20:1-1).

(2) DEFINE TRAINING REQUIREMENTS: "Determining if instruction is needed, and if so, determining what instruction to give the untrained personnel so that they can do the job well" (20:1-1).

(3) DEVELOP OBJECTIVES AND TESTS: "Expressing these instructional needs as specific objectives; and devising a test for each objective so you can know if and when the students achieve the objective" (20:1-1).

(4) PLAN, DEVELOP AND VALIDATE INSTRUCTION: "Designing instructional procedures and materials to help the students achieve the objectives; and having students try out the procedures and materials to be sure they are effective" (20:1-2).

(5) CONDUCT AND EVALUATE INSTRUCTION: "Conducting and evaluating the instruction; and later, evaluating the graduates as to their ability to do the job" (20:1-2).

ISD is implemented within the Air Force through a regulation (50-8), a manual (50-2), and a six volume pamphlet (50-58). These documents are specific in that ISD "applies to all personnel who plan, develop, approve, administer, conduct, evaluate, or manage Air Force instruction and its supporting materials" (20:i).

AFR 93-3 does not reference the ISD regulation, manual, or pamphlet, and does not state whether the five steps of the ISD model were applied when the Home Station Training requirements were developed. Senior Master Sergeant David Bolin, a contingency superintendent at HQ, AFESC stated that ISD was not applied to the Home Station training requirements when they were developed in 1977 and 1978 (7). However, the Chief of the Training Division at HQ, AFESC/DEOT stated that the ISD was starting to be applied to the Home Station training requirements (39). The Prime BEEF curriculum workshop conducted in September 1983 was the first step in applying the ISD (38).

#### Air Force Methods of Instruction

The Air Force recognizes thirteen methods of instruction. Figure 2-3 lists and defines thirteen methods of instruction (20:5-6), and figure 2-4 shows at what stage of learning eleven methods of instruction should be used (19:4-6). Lecture, demonstration, and performance methods of instruction will be reviewed in the following paragraphs.

Lecture. The lecture method of instruction is widely used in the Air Force. A lecture is a verbal explanation by an instructor to convey information. The advantages of a lecture are that it is an effective way to introduce a subject; an efficient way to present many ideas in a short period of time; an effective way to instruct large groups; and is

METHOD		DEFINITION
Presentation Methods	Lecture	A formal or semiformal oral presentation of information by a single individual, facts, concepts, problems, relationships, rules or principles presented orally either directly (as by classroom instructor) or indirectly (as by tape recorder, film, or TV).
	Demonstration	Presentation or portrayal of a sequence of events to show a procedure, technique, or operation; frequently combines an oral explanation with the operation or handling of systems equipment or material. May be presented directly (as by a classroom instructor) or indirectly (as by film, or TV, or by tape recorder if oral only).
	Exhibit	A visual or print display used to present information; for example, actual equipment, models, mockups, graphic materials, displays, chalkboard, projected images, or sand table.
	Indirect Discourse	Verbal interaction among two or more individuals which is heard by the student; may be a dramatization, such as role playing, or a dialogue between panel members, or a teaching interview (a question and answer session between instructor and visiting "expert").
	Assigned Reading	Printed verbal materials such as books, periodicals, manuals, or handouts. Readings may be course-assigned or self-assigned.
	Teaching Interview	Question and answer session between the instructor and a visiting "expert" following a highly structured plan.
Student Verbal Interaction Methods	Questioning	A presenter* controlled interactive process used to emphasize a point, stimulate thinking, keep students alert, check understanding, or review material. Questioning may be direct, as by a classroom instructor, or may be designed into a film or television presentation.
	Programmed Questioning	A presenter* controlled interactive process used to systematically demand a sequence of appropriate student responses; may be used directly (as by an instructor in a classroom) or indirectly (as by programmed booklets or teaching machines, including computers).
	Student Query	The provision by which students are given the opportunity to search for information, as by questioning a classroom instructor, tutor, coach, or an appropriately programmed computer.
	Seminar	A peer-controlled group interactive process in which task- or objective-related information and experience are evoked from the students. Questions may be used to evoke student contributions, but the seminar is distinguished from questioning.
	Discussion	An instructor-controlled interactive process of sharing information and experiences related to achieving a training objective.
Knowledge Application Method	Performance	Student interactions with things, data, or persons, as is necessary to attain training objectives, includes all forms of simulation (for example, games and interaction with hardware simulators) and interaction with actual equipment or job materials (for example, forms). Performance may be supervised by classroom instructor, tutor, coach, or peer to provide needed feedback.
	Case Study	A carefully designed description of a problem situation, written specifically to provoke systematic analysis and discussion.

Figure 2-3. Thirteen Methods of Instruction Defined

METHOD		EARLY STAGE	INTERMEDIATE STAGE	FINAL STAGE
Presentation Methods	Lecture			
	Demonstration			
	Exhibit			
	Indirect Discourse			
	Assigned Reading			
Student Verbal Interaction Methods	Questioning			
	Programmed Questioning			
	Student Query			
	Seminar			
	Discussion			
Knowledge Application Method	Performance			

Figure 2-4. When to Use Methods of Instruction

useful when course material changes frequently. The disadvantages of a lecture are that it limits student participation; that it may limit student interest; and that it does not result in maximum learning of the subject (19:4-9; 18:13-1,2). Prime BEEF personnel do not view a lecture as a particular effective method of training for wartime tasks (28:17).

Demonstration. Demonstrations show students what they are to do and how to do it. The advantages of demonstrations are that they can be used to introduce a subject to students; they provide an overview of the tasks to be accomplished; and can establish standards of performance. The disadvantages are that the number of students may have to be limited, and the instructor must be skilled in whatever he is demonstrating. Films can be considered as a demonstration method (19:4-10).

Performance. Performance or "hands-on" instruction is when the student performs the actual task. One advantage of performance training is that it allows the student to actually perform the task. The disadvantages of performance training are that it is time consuming, expensive, and requires a higher student/instructor ratio (19:4-13). When combined with the demonstration method this method is a proven way to teach mental or physical skills which require practice and "is based on the generally accepted principle that students learn best by doing" (18: 17-1). Prime BEEF personnel believe that additional hands-on training would strengthen the Home Station training program (28:17).

#### Summary

This chapter reviewed literature applicable to this research on Air Force Civil Engineering Home Station training. Specifically, the Air



Force Civil Engineering mission, importance of training, organizational impact on training, Prime BEEF organization, and Prime BEEF training were examined. Also, the Prime BEEF Home Station training requirements, recent evaluations of Home Station training, and Air Force training regulations, manuals, pamphlets, and reports which pertain to Home Station training were discussed.

### III. Methodology

#### Overview

This chapter describes the methodology to be used to accomplish the research objectives and answer the research questions presented in Chapter I. Specifically, this chapter describes the population and states why a census, rather than a sample, was taken of the population; the data collection plan; the questionnaires used to collect the data; the procedures used to process and edit the data; and the methods of data analysis used to answer the research questions.

#### Population

The population consists of all active duty personnel assigned to CF-1, CF-2, or CF-3 teams at CONUS, PACAF, and AAC bases, and to all active duty personnel assigned to Mobile or Rapid Runway Repair (RRR) teams at USAFE bases. While restricting the population to just these team members limits the generalization of the results the restrictions were due to training requirements of these teams.

CF-1, CF-2, and CF-3 teams were chosen for examination because AFR 93-3 requires these teams to train in all areas of Home Station training. The CF-4 through CF-6 teams are not required to train in 1) Expedient Methods, 2) Field Training, or 3) Annual bivouacs (12:12,13). USAFE's Mobile teams were chosen for examination because they are also required to train in all areas of Home Station training (29:5-7). USAFE's RRR teams were chosen for examination because the amount of time

they spend in Home Station rapid runway repair training is assumed to be the maximum amount of time expended on RRR training by any Prime BEEF team. This assumption was made because the USAFE RRR teams operate in an area which is directly threatened by communist forces. The USAFE RRR training time for the RRR teams will be compared to the RRR training times of the other commands.

#### Census

A census of all CONUS, PACAF, and AAC bases which have CF-1, CF-2, or CF-3 teams and all USAFE bases which have Mobile teams was undertaken. A census, rather than a sample, was performed because the number of bases which have these teams is small. Specifically, CONUS has 78 bases, PACAF has 3 bases, AAC has 2 bases, and USAFE has 8 bases which have teams comprising the population. Appendix H contains a list of the bases by major command.

The CONUS bases which have CF-1, CF-2, or CF-3 teams were identified by a computer printout obtained from the Engineering and Services Center. The PACAF bases which have CF-1, CF-2, or CF-3 teams were identified through a briefing given by Colonel Goodwin, the Deputy Chief of Staff for Engineering and Services at HQ PACAF, to AFIT civil engineering students (35) and the AAC bases were identified through a telephone conversation with the command's Prime BEEF manager (8). USAFE bases which have Mobile or RRR teams were identified through USAFE's draft supplement to AFR 93-3 (29:6,11).

### Data Collection Plan

A questionnaire was mailed to the bases comprising the population. The questionnaire was designed to be answered by the Prime BEEF program manager at each base since that individual keeps the Prime BEEF training records. AFR 93-3, the Prime BEEF regulation, requires records be maintained on Home Station training for each individual (12:15). The addresses of the bases were obtained from AFR 10-4, which lists squadron numbers and addresses. The complete survey package was mailed to the Base Civil Engineer with a request for him to forward the survey to the squadron's Prime BEEF manager. This procedure was adopted for two reasons:

1. Prime BEEF managers' office symbols are not standardized among Air Force commands and no list of Prime BEEF managers office symbols was available. Therefore, the questionnaire could not be sent directly to the Prime BEEF managers.
2. A higher return rate seemed likely if the Base Civil Engineer was involved.

The questionnaire requested data about the amount and method of training an individual assigned to the populations' teams had received during the past 12 months in each of the following areas:

1. Rapid runway repair
2. Weapons training
3. Military sanitation
4. Government vehicle operation
5. Expedient repair methods
6. Explosive ordnance reconnaissance
7. Chemical warfare
8. Personal, work party, and convoy security
9. War Reserve Material field equipment
10. Annual bivouac

Furthermore, the questionnaire requested data about the completeness of assigned Prime BEEF team training equipment.

A high return rate of the questionnaire was essential to the success of this research since the population is small. Also, since each MAJCOM was analyzed individually, the population size would be further reduced. An initial return rate of 70 percent was expected as a 1980 thesis which requested information from Prime BEEF managers had a return rate of 72 percent (37:38). In an effort to achieve an even higher return rate a second mailing of the questionnaires was made five weeks after the first mailing. Out of a population of 91 bases, 85 questionnaires were returned for an overall return rate of 93.4 percent. Considering that the average response rate for Air Force surveys is approximately 60 percent (48:46), this research had a successful survey.

#### Questionnaires

Two questionnaires were developed to answer the research questions stated in Chapter I because no existing questionnaires could provide the needed data. One questionnaire was used to survey CONUS, AAC, and PACAF bases. The second questionnaire was used to survey USAFE bases. USAFE bases required a different questionnaire because the USAFE Prime BEEF organization is different from the rest of the Air Force.

The questionnaires were developed in accordance with the following standard procedures (45:157-217; 31:213-242):

1. The number of questions required to obtain the information was kept to a minimum.
2. The wording of the questions was kept simple and easy to understand. Every attempt was made to eliminate ambiguity in the questions.
3. Clarifying definitions were provided on the first page of the questionnaire to insure further elimination of possible ambiguities.

4. Questions asked for numerical data or for a choice among several alternatives.
5. All possible answers to the questions were presented including an OTHER category.
6. The questions were widely spaced on each page with each area of training or team equipment clearly indicated by a subheading.
7. Answers to the questions were to be marked directly on the questionnaire thereby eliminating a coded answer sheet.
8. Respondents were guaranteed anonymity and asked to provide truthful answers.

Several draft formats of the CONUS questionnaire were prepared and opinions solicited from civil engineering officers attending AFIT concerning which format they would prefer to answer. Based on this input a final first draft of the questionnaire was prepared. This first draft was pretested on:

1. 12 civil engineering officers enrolled in AFIT's graduate Engineering Management Program. Each officer had either been a Prime BEEF manager or had been a Prime BEEF team member.
2. 47 civil engineering officers who were attending a Contingency Engineering course at AFIT's School of Civil Engineering. Prime BEEF experience among the officers ranged from extensive to only a few months.
3. Wright-Patterson AFB's Prime BEEF program manager, CMSGT Bolden.

The CONUS questionnaire was also forwarded to HQ, PACAF for review based on a request from their staff. HQ, PACAF did not suggest any revisions.

CMSGT McCloud and Captain Hineman of USAFE's Headquarters staff were contacted by telephone about the USAFE questionnaire. Captain Hineman furnished a copy of USAFE's Prime BEEF policy letter dated 29 August 1983 and a copy of USAFE's draft supplement to AFR 93-3. The policy letter stated that USAFE bases would use the draft supplement to

AFR 93-3 for guidance until the final version of the supplement was issued. The draft supplement was used extensively in preparing USAFE's questionnaire. USAFE's questionnaire, which is similar in format to the CONUS, PACAF, and AAC questionnaire, was pretested on two civil engineering officers enrolled in the Engineering Management Program at AFIT. The two officers had previously been assigned to USAFE at the base level. One officer had been the officer-in-charge of the Exercise Evaluation Team for the RRR team at Spangdahlem AB, Germany. The other officer had been the Prime BEEF manager at Hahn AB, Germany.

Based on the comments received from the pretests, the two questionnaires were revised and sent to the Air Staff (AF/LEEX) for approval. AF/LEEX forwarded the questionnaires to the Air Force Engineering and Service Center (AFESC) for review. AFESC furnished comments on the questionnaires. Several of their comments were incorporated into the questionnaires, and the Air Staff approved the two questionnaires. Copies of the two questionnaires are shown in Appendix I.

#### Data Processing and Editing

Responses to questions which asked for interval or ratio numerical level data were entered directly into a computer data file. Responses to questions which asked for nominal or ordinal level data were converted to a numerical value and were also entered into a computer data file for use on a CYBER computer system. Appendix J lists the complete data file for the surveys. Appendix K contains the Keys that relate the numerical values of the data files to the survey questions.

Editing of the data used the standard practice of reviewing the responses for inconsistencies (31:370).

When two answers are contradictory, it may be possible to determine which, if either of the two, is correct. When this cannot be done it may be necessary to discard both answers and to classify the responses as "unknown" [45:433].

Where possible, inconsistent answers were resolved by contacting the person who filled out the questionnaire. If the inconsistent answers could not be resolved, then they were discarded and the entry in the data was as missing data. The primary inconsistency in the data was differences between the total training time and the various methods of instruction training times for specific training requirements. The methods of instruction training times should add up to the total training time for the specific training requirements.

#### Data Analysis

This section presents how outlier values were determined and processed, the categories in which the data was analyzed, the descriptive statistics which were calculated, and the computer programs which were used to calculate the descriptive statistics.

#### Outlier Values

An outlier value is the largest or smallest observation which "is significantly far removed from the main body of the data (30:275)." Outlier values skew the calculated mean and standard deviation values such that they do not truly represent the mean and standard deviation values of the population under study.



How might we process the data so that our estimates will come closer to the mean and standard deviation of this basic distribution? If very little is known about the distribution from which the extraneous observations may come, about the best one can do is to "tag" the observations and remove them from estimates of  $\mu$  and  $\sigma$ .

The Empirical Rule was used to determine whether the responses to the questions contained outlier values (10):

Given a distribution of measurements that is approximately bell-shaped, the interval  $\mu + 3\sigma$  will contain approximately 99.7% of the measurements [41:37,38]

An initial analysis, which is described in forthcoming sections, was performed on the data and the Empirical rule ( $\mu + 3\sigma$ ) was used to check each ratio level question for outlier values. If a question contained outlier values the value was temporarily eliminated from the data base and the analysis was conducted a second time. The descriptive statistics obtained from the analysis of the data without outlier values more accurately estimates the mean and standard deviation of the population. However, the results of the analysis, with and without outlier values, are presented in Chapter IV.

#### Analysis Categories

The data was analyzed within the following categories:

##### CONUS Commands

- \*1. Combined CONUS
2. Air Force Logistics Command (AFLC)
3. Air Force Systems Command (AFSC)
4. Air Training Command (ATC)
5. Military Airlift Command (MAC)
6. Strategic Air Command (SAC)
7. Tactical Air Command (TAC)
8. Commands with only one base (OTHER)

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\* Combined CONUS included the data from all the CONUS commands (categories 2 through 8).

### NonCONUS Commands

1. Alaskan Air Command (AAC)
2. Pacific Air Force (PACAF)
3. U.S. Air Forces Europe (USAFE)

The nonCONUS commands was not analyzed together because USAFE has a different Prime BEEF organization than the rest of the Air Force, and a different questionnaire was used to obtain data from USAFE bases.

### Descriptive Statistics

Since a census, not a sample, was attempted, descriptive statistics rather than inferential statistics were used to analyze the data (40:4,5,186,187; 44:3,4). Realistically, a 100 percent return rate for questionnaires seldom is achieved so a complete census was not anticipated. However, since the population, especially of the individual major commands, is small (from 1 to 24 bases per command) descriptive statistics were used instead of inferential statistics (10). The number of responses for each command are identified for each descriptive statistic calculated (10).

For questions on the interval or ratio scale, the descriptive statistics which were calculated was the mean, and standard deviation. The descriptive statistics calculated for the nominal or ordinal scale questions were the number and percentages of responses in each category.

Mean. The mean is simply the average of the data (40:47,48; 44:44). The formula used to calculate the population mean is (40:47):

$$\mu = \frac{\sum_{i=1}^N X_i}{N}$$

where

$\mu$  is the mean for the population  
 $X_i$  is the individual values of the population  
 $N$  is the number of values from which the mean is calculated

Standard Deviation. The standard deviation is a measure of the extent of variation/dispersion in a group of data. The more spread out the data is the larger the standard deviation will be; the closer the data concentrates about one point/value, the smaller the standard deviation will be (55:249,250). If all the observations had the same value then the standard deviation would be zero. Thus the standard deviation provides a way of evaluating how well the mean represents all the data in the population. The formula used to calculate the standard deviation is (43:184)

$$\sigma = \sqrt{\frac{(\sum_{i=1}^N X_i^2) - N\mu^2}{N-1}}$$

where

$\sigma$  is the standard deviation of the X values of the population  
 $N$  is the number of observations comprising the population  
 $X_i$  is the value each observation

The preceding standard deviation formula is used by the Computer system "Statistical Package for the Social Sciences" (SPSS), which will be discussed in the following sections, to save computer time (43:184) and is not the same population standard deviation formula found in statistics textbooks (44:81). Since "SPSS" was the analysis program available on AFIT's CYBER computer, the "SPSS" standard deviation formula was used.

#### Statistical Package for the Social Sciences

The descriptive statistics for this research were calculated by using programs in the "SPSS". The two programs used were Frequencies and Condescriptive.

Frequencies. Frequency of responses to questions on the nominal or ordinal level were calculated by the Frequencies program (43:194-198).

Condescriptive. Each question on the interval or ratio level was analyzed using the Condescriptive program. The Condescriptive program calculated the mean, and standard deviation. (43:185).

#### CONUS, PACAF, and AAC Questionnaire

For the CONUS, PACAF, and AAC questionnaire questions 1, 2, 11b, 11c, and 12a were analyzed by the "SPSS" Frequencies program to obtain the frequencies and percentages of responses. Questions 3a, 3b, 4a, 4b, 5a, 5b, 6a, 6b, 7a, 7b, 8a, 8b, 9a, 9b, 10a, 10b, 10c, 10d, 11a, 11b, 12a, 13b, 13c, 13d, and 13e were analyzed by the "SPSS" Condescriptive program to obtain the mean and standard deviation. For questions 13b through 13e a "yes" answer was equated to a zero percent missing response.

Questions 3a, 4a, 5a, 6a, 7a, 8a, 9a, 10a, 10c, 11a, and 12a were used to answer Research Questions 1, 3, and 4. Questions 3b1 through 3b4, 4b1 through 4b4, 5b1 through 5b4, 6b1 through 6b4, 7b1 through 7b4, 9b1 through 9b4, 10b1 through 10b4, 10d1 through 10d4, 11b1 through 11b4, 12b, and 12c were used to answer Research questions 2, 3, and 4. Research Question 5 was answered by survey questions 13a through 13e.

#### USAFE Questionnaire

For USAFE's questionnaire questions 1, 2, 12a, 12b(1), 12b(2), 13a, and 14 were analyzed by the "SPSS" Frequencies program to obtain the frequencies and percentages of responses. Questions 3a, 3b, 4a, 4b, 5a,

5b, 6a, 6b, 7a, 7b, 8a, 8b, 9a, 9b, 10a, 10b, 11a, 11b, 12a, 12b, 13b, 13c, 15a, 15b, 16a, and 16b, were analyzed by the "SPSS" Condescriptive program to obtain the mean and standard deviation. For questions 13b and 13c a yes answer will be equated to a zero percent missing response.

Survey questions 3a through 12b and 14 through 16b4 were used to answer Research Question 4. Research Question 5 was answered by survey questions 13a through 13c.

### Summary

This chapter presented the methodology used to accomplish the research objectives and answer the research questions presented in Chapter I. Specifically, the population, the data collection plan, and the questionnaires used to collect the data were discussed. Also, the data editing process, and the methods of data analysis, used to answer the research questions, were reviewed.

## IV. Results

### Overview

This chapter presents the descriptive statistics, obtained using the "SPSS" programs Frequencies and Condescriptive, for the data obtained from the two survey questionnaires. Statistics are reported separately for a combined Continental United States (CONUS) category, and for each nonCONUS command. Because the nonCONUS commands operate in areas which are closer to potentially hostile forces than the CONUS commands, their preparedness for war is assumed to be higher than the CONUS commands and any statistics based on combined CONUS and nonCONUS responses would not represent a meaningful assessment of the combined data. Descriptive statistics are presented for the responses to each survey question as well as for the additional variables calculated by the computer using COMPUTE statements (total training time, total lecture and demonstration training time, total film training time, total hands-on training time, and total other training time). If a variable contained an outlier value, the descriptive statistics for the variable are presented with and without the outlier value.

This chapter is divided into three sections. Section A presents the descriptive statistics for the combined CONUS commands, section B presents the descriptive statistics for each nonCONUS command, and section C presents comments written on the questionnaires by respondents. The nonCONUS command results were not combined into one category because two different questionnaires were used to obtain the data. Two questionnaires were used because USAFE has a Prime BEEF organization different from the rest of the Air Force.

## Section A: Combined CONUS

This section contains the descriptive statistics for the CF-1, CF-2 and CF-3 teams located in the continental United States. Specific descriptive statistics for each major Air Force command located in the continental United States are contained in Appendix L. These major Air Force commands are:

1. Air Force Logistics Command (AFLC)
2. Air Force Systems Command (AFSC)
3. Air Training Command (ATC)
4. Military Airlift Command (MAC)
5. Strategic Air Command (SAC)
6. Tactical Air Command (TAC)
7. Other CONUS commands (OTHER)

Population statistics are presented first, followed by statistics of Home Station training and Prime BEEF team equipment. The data for this section contained outlier values in questions 5a, 5b2 through 6a, 6b2 through 7a, 7b2 through 8a, and 8b3 through 11b4. The statistics for these questions (variables), along with the summation variables, are presented with and without the outlier values.

### Population Data

Survey Question 1. Table 4-1 shows the number of CONUS bases surveyed and the number of CONUS bases which responded.

Survey Question 2. Table 4-2 lists how many of the respondents have Prime BEEF CF-1, CF-2, or CF-3 teams.

### Home Station Training Data

Survey Questions 3a, 3b1, 3b2, 3b3, and 3b3. Questions 3a, 3b1, 3b2, 3b3, and 3b4 collected annual Rapid Runway Repair (RRR)

Table 4-1  
CONUS Population Data

Commands	Population	Surveys Returned	Percent Returned
AFLC	5	5	100.0
AFSC	4	3	75.0
ATC	11	10	90.9
MAC	14	13	92.9
SAC	24	23	95.8
TAC	17	17	100.0
Other Commands	<u>3</u>	<u>3</u>	100.0
Total	78	74	

CONUS return rate = 94.9%

Table 4-2  
Respondents Which Have CF-1, CF-2, or CF-3 Teams

Commands	Surveys Returned	Respondents Which Have CF-1, CF-2, or CF-3 Teams
AFLC	5	5
AFSC	3	3
ATC	10	10
MAC	13	13
SAC	23	23
TAC	17	17
Other Commands	<u>3</u>	<u>3</u>
Total	74	74

training times (hours) for a CF-1, CF-2, or CF-3 team member. Question 3a determined the annual RRR training time, while questions 3b1 through 3b4 collected RRR training times in the following methods of instruction: times for a team member in the following methods of instruction:



Question 3b1	Lecture and/or Demonstration
Question 3b2	Film
Question 3b3	Hands-on
Question 3b4	Other

Table 4-3 shows the RRR training times CF-1, CF-2, or CF-3 team members.

Table 4-3  
RRR Training Times - CONUS

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	3a	73	12.30	32.60	276.00	1.00
Without Outlier		72	8.63	9.20	53.00	1.00
Lecture/Demonst.	3b1	73	2.04	4.28	36.00	0.00
Without Outlier		72	1.57	1.44	8.00	0.00
Films	3b2	73	1.55	3.80	32.00	0.00
Without Outlier		72	1.13	1.20	5.00	0.00
Hands-on	3b3	73	7.75	17.97	144.00	0.00
Without Outlier		72	5.86	7.89	48.00	0.00
Other	3b4	73	0.96	7.49	64.00	0.00
Without Outlier		72	0.08	0.37	2.00	0.00

Other = using a model, weekly team competition, locally produced sound-on-slides, and exercise similar to Field 4, Eglin AFB

Survey Questions 4a, 4b1, 4b2, 4b3, and 4b4. These questions collected annual weapons training times for a CF-1, CF-2, or CF-3 team member. Question 4a determined the annual total weapons training time, while questions 4b1 through 4b4 gathered weapons training time in the following categories:

Question 4b1	Lecture and/or Demonstration
Question 4b2	Films
Question 4b3	Hands-on
Question 4b4	Other

Table 4-4 shows the weapons training times.

Table 4-4

## Weapons Training Times - CONUS

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	4a	73	9.16	13.40	104.00	1.00
Without Outlier		72	7.85	7.33	45.00	1.00
Lecture/Demonst.	4b1	73	2.45	1.49	7.00	0.00
Without Outlier		72	2.38	1.40	6.00	0.00
Films	4b2	73	0.21	0.54	3.00	0.00
Without Outliers		70	0.12	0.31	1.00	0.00
Hands-on	4b3	73	6.51	12.61	96.00	0.00
Without Outlier		72	5.26	6.85	40.00	0.00
Other	4b4	73	0.01	0.12	1.00	0.00
Without Outlier		72	0.00	0.00	0.00	0.00
Other = not specified						

Survey Questions 5a, 5b1, 5b2, 5b3, and 5b4. These questions collected annual military sanitation training times for a CF-1, CF-2, or CF-3 team member. Question 5a determined the total annual military sanitation training time, while the 5b questions compiled annual military sanitation training time in the following areas:

Question 5b1	Lecture and/or Demonstration
Question 5b2	Film
Question 5b3	Hands-on
Question 5b4	Other

Table 4-5 shows the military sanitation training times.

Survey Questions 6a, 6b1, 6b2, 6b3, and 6b4. Questions 6a through 6b4 collected annual expedient repairs training times for a CF-1, CF-2, or CF-3 team member. Question 6a determined total annual expedient repairs training time, while the 6b questions gathered annual expedient repairs training times in the following methods of instruction:

Table 4-5  
Military Sanitation Training Times - CONUS

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	5a	74	3.86	4.13	18.00	0.00
Without Outlier		73	3.66	3.81	16.00	0.00
Lecture/Demonst. No Outliers	5b1	74	1.48	1.23	5.00	0.00
Films	5b2	74	0.67	0.84	4.00	0.00
Without Outliers		72	0.58	0.63	2.50	0.00
Hands-on	5b3	74	1.47	2.76	12.00	0.00
Without Outliers		72	1.21	2.28	8.00	0.00
Other	5b4	74	0.23	1.86	16.00	0.00
Without Outlier		73	0.01	0.12	1.00	0.00

Other = locally produced video and one was not specified

Question 6b1	Lecture and/or Demonstration
Question 6b2	Film
Question 6b3	Hands-on
Question 6b4	Other

Statistics for annual expedient repairs training times are presented in Table 4-6.

Survey Questions 7a, 7b1, 7b2, 7b3, and 7b4. These questions collected annual explosive ordnance reconnaissance (EOR) training times for a CF-1, CF-2, or CF-3 team member. Question 7a determined the annual EOR total training time, while the 7b questions collected annual EOR training times in the following areas:

Question 7b1	Lecture and/or Demonstration
Question 7b2	Film
Question 7b3	Hands-on
Question 7b4	Other

Table 4-7 shows the EOR training times.

Table 4-6

## Expedient Repair Training Times - CONUS

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	6a	74	6.53	9.57	66.00	0.00
Without Outlier		73	5.71	6.57	30.00	0.0
Lecture/Demonst. No Outliers	6b1	74	1.28	0.98	4.00	0.00
Films	6b2	74	0.38	0.74	4.00	0.00
Without Outlier		73	0.33	0.61	2.50	0.00
Hands-on	6b3	74	4.86	9.32	64.00	0.00
Without Outlier		73	4.05	6.23	27.00	0.00
Other	6b4	74	0.01	1.12	1.00	0.00
Without Outlier		73	0.00	0.00	0.00	0.00

Other = locally produced slides,

Table 4-7

## Explosive Ordnance Reconnaissance Training Times - CONUS

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	7a	74	3.48	6.56	52.00	0.40
Without Outlier		73	2.81	3.23	16.00	0.40
Lecture/Demonst. No Outliers	7b1	74	1.04	1.05	4.00	0.00
Films	7b2	74	0.68	0.94	5.00	0.00
Without Outliers		71	0.53	0.56	2.50	0.00
Hands-on	7b3	74	1.70	6.00	48.00	0.00
Without Outlier		73	1.07	2.51	12.00	0.00
Other	7b4	74	0.03	0.16	1.00	0.00
Without Outliers		72	0.00	0.00	0.00	0.00

Other = using model and EOD personnel provide demonstration

Survey Questions 8a, 8b1, 8b2, 8b3, and 8b4. These survey questions collected annual chemical warfare training times for a CF-1, CF-2, or CF-3 team member. Question 8a compiled annual total chemical warfare training times, while questions 8b1 through 8b4 collected annual chemical warfare training times for the following methods of instruction:

Question 8b1	Lecture and/or Demonstration
Question 8b2	Film
Question 8b3	Hands-on
Question 8b4	Other

Table 4-8 contains the annual chemical warfare training times.

Table 4-8  
Chemical Warfare Training Times - CONUS

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	8a	73	10.29	8.62	60.00	2.00
Without Outliers		71	9.12	4.85	26.00	2.00
Lecture/Demonst.	8b1	73	3.36	1.65	8.00	0.00
Films	8b2	73	0.73	0.85	3.00	0.00
Hands-on	8b3	73	6.07	8.03	53.00	0.00
Without Outliers		71	4.93	4.15	20.00	0.00
Other	8b4	73	0.13	0.58	4.00	0.00
Without Outlier		72	0.02	0.13	1.00	0.00

Other = locally produced video, task qualification training, decontamination practice, and proficiency training.

Survey Questions 9a, 9b1, 9b2, 9b3, and 9b4. Questions 9a through 9b4 collected annual personal, convoy, and work party security training times for a CF-1, CF-2, or CF-3 team member. Question 9a determined the annual total security training time, while the 9b questions compiled

annual security training times in the following areas:

Question 9b1	Lecture and/or Demonstration
Question 9b2	Film
Question 9b3	Hands-on
Question 9b4	Other

Table 4-9 presents the annual security training times.

Table 4-9

Personal, Convoy, and Work Party Security Training Times - CONUS

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	9a	74	11.48	20.29	150.00	0.00
Without Outliers		72	8.67	9.39	61.00	0.00
Lecture/Demonst.	9b1	74	2.05	1.75	10.00	0.00
Without Outliers		72	1.86	1.31	6.00	0.00
Films	9b2	74	0.54	1.01	5.00	0.00
Without Outliers		72	0.44	0.77	3.00	0.00
Hands-on	9b3	74	8.85	19.07	140.00	0.00
Without Outliers		72	6.15	8.25	56.00	0.00
Other	9b4	74	0.42	3.49	30.00	0.00
Without Outlier		73	0.01	0.12	1.00	0.00

Other = locally prepared slides

Survey Questions 10a, 10b1, 10b2, 10b3, and 10b4. These questions gathered annual Prime BEEF vehicle training times for equipment operators who were members of CF-1, CF-2, or CF-3 teams. Question 10a determined the annual total vehicle training time for equipment operators, while the 10b questions collected annual vehicle training times for the following areas:

Question 10b1	Lecture and/or Demonstration
Question 10b2	Film
Question 10b3	Hands-on
Question 10b4	Other

Table 4-10 lists the vehicle training times for equipment operators.

Table 4-10

Prime BEEF Vehicle Training Times for Equipment Operators - CONUS

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10a	68	14.48	52.32	416.00	0.00
Without Outlier		67	8.49	17.32	96.00	0.00
Lecture/Demonst.	10b1	68	2.14	12.13	100.00	0.00
Without Outlier		67	0.68	1.45	8.00	0.00
Films	10b2	68	0.79	3.72	30.00	0.00
Without Outlier		67	0.35	0.98	6.00	0.00
Hands-on	10b3	68	11.74	40.58	316.00	0.00
Without Outlier		67	7.20	15.75	96.00	0.00
Other	10b4	68	0.26	1.94	16.00	0.00
Without Outlier		67	0.02	0.14	1.00	0.00

Other = base drivers training and wearing of gas mask

Survey Questions 10c, 10d1, 10d2, 10d3, and 10d4. These questions collected annual Prime BEEF vehicle training times for a CF-1, CF-2, or CF-3 team member who was not an equipment operator. Question 10c determined the annual total vehicle training time for a nonequipment operator, while questions 10d1 through 10d4 compiled annual vehicle training times in the following areas:

Question 10d1	Lecture and/or Demonstration
Question 10d2	Film
Question 10d3	Hands-on
Question 10d4	Other

Table 4-11 lists the vehicle training time for CF-1, CF-2, or CF-3 team members who were not equipment operators.

Table 4-11

## Vehicle Training Times for Nonequipment Operators - Combined CONUS

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10c	63	3.63	8.12	60.00	0.00
Without Outlier		62	2.72	3.76	16.00	0.00
Lecture/Demonst.	10d1	63	1.20	4.06	30.00	0.00
Without Outlier		62	0.74	1.70	8.00	0.00
Films	10d2	63	0.29	0.92	6.00	0.00
Without Outlier		62	0.20	0.57	3.00	0.00
Hands-on	10d3	63	2.12	4.49	30.00	0.00
Without Outlier		62	1.67	2.74	14.00	0.00
Other	10d4	63	0.02	0.13	1.00	0.00
Without Outlier		62	0.00	0.00	0.00	0.00

Other = wearing gas mask

Survey Questions 11a, 11b1, 11b2, 11b3, and 11b4. Questions 11a through 11b4 collected annual war reserve material (WRM) field equipment training times for a CF-1, CF-2, or CF-3 team member. Question 11a determined the annual total WRM field equipment training time, while questions 11b1 through 11b4 gathered annual WRM field equipment training times in the following methods of training:

Question 11b1	Lecture and/or Demonstration
Question 11b2	Film
Question 11b3	Hands-on
Question 11b4	Other

Table 4-12 contains the WRM field equipment training times.

Computed Variables. The variables of summation total time, summation lecture and/or demonstration, summation film, summation hands-on, and summation other were calculated by the computer using COMPUTE



Table 4-12

## WRM Field Equipment Training Times - CONUS

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	11a	66	7.25	32.17	256.00	0.00
Without Outlier		65	3.42	8.35	55.00	0.00
Lecture/Demonst.	11b1	66	0.99	4.44	36.00	0.00
Without Outlier		65	0.45	0.74	3.00	0.00
Films	11b2	66	0.33	0.76	4.00	0.00
Without Outlier		65	0.28	0.61	2.50	0.00
Hands-on	11b3	66	5.92	27.81	220.00	0.00
Without Outlier		65	2.62	7.63	53.00	0.00
Other	11b4	66	0.01	0.06	0.50	0.00
Without Outlier		65	0.00	0.00	0.00	0.00

Other = briefing oriented to AFM 86-3, volume 1

statements. The computed variable, summation total time, shows the total training time a CF-1, CF-2, or CF-3 team member receives annually and was calculated by adding questions 3a, 4a, 5a, 6a, 7a, 8a, 9a, 10c, and 11a. The remaining computed variables show how much of the total annual training time was spent in different methods of instruction: lecture and/or demonstration, film, hands-on, and other methods of instruction. Computed variables, summation lecture and/or demonstration, summation film, summation hands-on, and summation other, were calculated using the following equations:

$$\text{summation lecture and/or demonstration} = 3b1+4b1+5b1+6b1+7b1+8b1+9b1+10d1+11b1$$

$$\text{summation film} = 3b2+4b2+5b2+6b2+7b2+8b2+9b2+10d2+11b2$$

summation hands-on =  
3b3+4b3+5b3+6b3+7b3+8b3+9b3+10d3+11b3

summation other =  
3b4+4b4+5b4+6b4+7b4+8b4+9b4+10d4+11b4

Table 4-13 contains the computed variables annual training times.

Table 4-13  
Summation of Training Times - CONUS

Training Times (hours)	N	Mean	Standard Deviation	Maximum	Minimum
Summation Total	74	66.26	70.52	393.00	13.34
Without Outliers	74*	50.53	35.85	215.00	13.34
Summation Lecture/Demon.	74	15.49	9.60	55.00	0.00
Without Outliers	74*	13.78	6.13	32.00	0.00
Summation Film	74	5.29	6.91	52.00	0.00
Without Outliers	74*	4.16	3.47	20.00	0.00
Summation Hands-on	74	44.02	57.83	358.00	3.00
Without Outliers	74*	31.46	30.45	193.00	3.00
Summation Other	74	1.39	7.70	64.00	0.00
Without Outliers	74*	0.11	0.41	2.00	0.00

Survey Question 12a. Question 12a identified the annual number of days a CF-1, CF-2, or CF-3 team member spent on field bivouac. Table 4-14 lists the number of days spent on field bivouac.

Survey Question 12b. Question 12b identified whether the annual field bivouac was held on, off, or on and off the base. Table 4-15 lists where the field bivouac was held.

\* The summation variables "N" value does not change because outliers were removed from the individual questions which comprised the summation variables. For a more expanded explanation see chapter III.

Table 4-14

## Days Spent on Bivouac - CONUS

	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Days on Bivouac	12a	73	4.47	4.79	36.00	0.00
Without Outliers		72	4.03	3.01	18.00	0.00

Table 4-15

## Location of Annual Field Bivouac - CONUS

Bivouac	Bases	
	Number	Percent
On Base	47	63.5
Off Base	17	23.0
On and Off Base	9	12.2
(Missing Data)	1	1.4
Total	74	

Survey Question 12c. Question 12c identified organizations which participated in and/or supported the annual field bivouac. Participate and support were defined in the survey questionnaire as shown below:

Participate      Act as instructors, aggressors; or train with civil engineering personnel.

Support            Provide vehicles, equipment, supplies, or personnel such as medics to support the bivouac.

Table 4-16 shows the organizations which participate in or support the annual field bivouac.

Table 4-16

## Organizations Which Participate In or Support Bivouac - CONUS

(N = 74 bases) Organization	Participate		Support	
	Number	Percent	Number	Percent
Security Police	48	64.9	32	43.2
Hospital/Medical Center	25	33.8	41	55.4
Disaster Preparedness	23	31.1	33	44.6
Transportation	7	9.5	53	71.6
Supply	4	5.4	35	47.3
Food Services	38	51.4	48	64.9
Explosive Ordnance Det.	18	24.3	25	33.8
Air Force Reserve	3	4.1	13	17.6
Air National Guard	4	5.4	17	23.0
Army	5	6.8	17	23.0
Army Reserve	2	2.7	17	23.0
Army National Guard	6	8.1	24	24.4
Navy	1	1.4	2	2.7
Navy Reserves	0	0.0	2	2.7
Marines	1	1.4	1	1.4
Marine Reserves	2	2.7	3	4.1
Others	5	6.8	*10	13.5
Others who participate		*Others who support		
Combat Commo. Group		Tactical Control Flights		
U.S. Customs Service		Other Bases		
WARSKILL personnel		Local Civil Defense		
Small Arms Training Det.		USAF Academy CWIT		
(reported twice)		National Park Service		
		Local Police		
		Parks Department		
		Girl Scouts		
		FEMA		
		Cadet Wing		
		Combat Commo Group		

\* One organization was  
reported by two bases

Team Equipment Data.

Survey Questions 13a1, 13a2, 13a3, and 13a4. Questions 13a1 through 13a4 identified how many bases had contingency support sets

(CSS), Home Station training sets (HSTS), CF-2 team kits, and RRR mini-kits. Table 4-17 shows how many bases have team equipment.

Table 4-17

Number of Bases Which Have Prime BEEF Team Equipment - CONUS

Team Equipment	N	Bases With Team Equipment	
		Number	Percent
CSS	70	28	40.0
HSTS	70	35	50.0
CF-2 Team Kit	73	72	98.6
RRR mini-kit	73	72	98.6

Survey Questions 13b, 13c, 13d, and 13e. These questions identified what percentage of equipment was missing from the team equipment sets and Table 4-18 lists the amounts of team equipment missing.

Table 4-18

Percentage Missing From Prime BEEF Team Equipment - CONUS

Team Equipment	Survey Question	N	Mean	Standard Deviation	Maximum	Minimum
	Number					
CSS	13b	28	23.41	23.13	80.00	0.00
HSTS	13c	36	18.23	26.08	100.00	0.00
Without Outlier		34	15.82	22.19	90.0	0.00
CF-2 Team Kit	13d	71	8.52	24.64	98.00	0.00
Without Outlier		67	1.94	4.60	30.00	0.00
RRR Mini-Kit	13e	72	13.54	22.80	100.00	0.00
Without Outliers		70	11.24	18.34	80.00	0.00

## Section B: NonCONUS Commands

Section B contains the descriptive statistics for nonCONUS commands. The nonCONUS commands are the Alaskan Air Command (AAC), Pacific Air Command (PACAF), and U.S. Air Forces Europe (USAFE). Neither AAC, PACAF, nor USAFE's descriptive statistics contained outliers values.

Section B, unlike section A, will not present a combined nonCONUS commands category. A combined nonCONUS category will not be presented because U. S. Air Forces Europe has a different Prime BEEF organization than the rest of the Air Force, and therefore, a different questionnaire was used to obtain data from USAFE.

### Alaskan Air Command

This section presents descriptive statistics for AAC. Population statistics are presented first, followed by statistics of Home Station training and Prime BEEF team equipment.

#### Population Data

Survey Questions 1 and 2. Table 4-19 shows the number of surveys mailed to AAC bases, the number of AAC bases which responded, and how many of the respondents have Prime BEEF CF-1, CF-2, or CF-3 teams.

#### Home Station Training Data

Survey Questions 3a, 3b1, 3b2, 3b3, and 3b4. Questions 3a, 3b1, 3b2, 3b3, and 3b4 collected annual Rapid Runway Repair (RRR) training times (hours) for a CF-1, CF-2, or CF-3 team member.

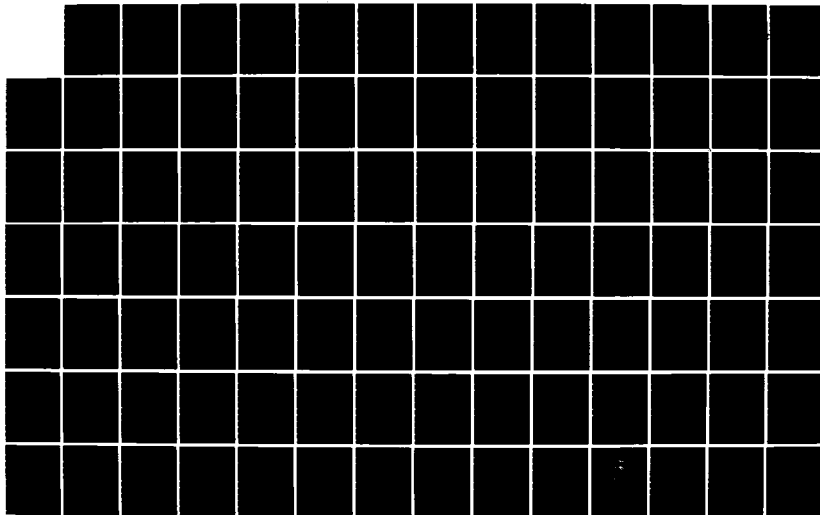
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PRIME BEEF HOME STATI.. (U) AIR FORCE INST OF TECH  
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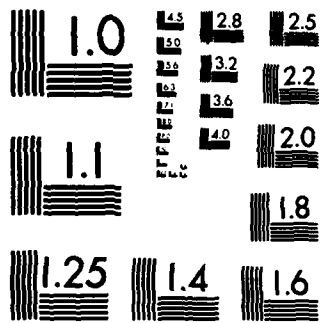




Table 4-19

## AAC Population Data

(Population = 2)	Survey Question	Number
	Number	
Bases which responded	1	2
Respondents which have CF or PB 1, 2, or 3 teams	2	2
AAC survey return rate = 100.0%		

Question 3a determined the total annual RRR training time for a CF-1, CF-2, or CF-3 team member, while questions 3b1 through 3b4 compiled RRR training times for a team member in the following methods of instruction:

Question 3b1	Lecture and/or Demonstration
Question 3b2	Film
Question 3b3	Hands-on
Question 3b4	Other

Table 4-20 shows the RRR training times for the AAC bases.

Table 4-20

## RRR Training Times - AAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	3a	2	1.50	0.71	2.00	1.00
Lecture/Demonst.	3b1	2	0.00	0.00	0.00	0.00
Films	3b2	2	1.50	0.71	2.00	1.00
Hands-on	3b3	2	0.00	0.00	0.00	0.00
Other	3b4	2	0.00	0.00	0.00	0.00

Survey Questions 4a, 4b1, 4b2, 4b3, and 4b4. These questions collected annual weapons training times for a CF-1, CF-2, or CF-3 team member. Question 4a determined the annual total weapons training time, while questions 4b1 through 4b4 gathered weapons training time in the following categories:

Question 4b1	Lecture and/or Demonstration
Question 4b2	Films
Question 4b3	Hands-on
Question 4b4	Other

Table 4-21 shows the weapons training times.

Table 4-21  
Weapons Training Times - AAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	4a	2	6.50	0.71	7.00	6.00
Lecture/Demonst.	4b1	2	2.50	2.12	4.00	1.00
Films	4b2	2	0.50	0.71	1.00	0.00
Hands-on	4b3	2	3.50	0.71	4.00	3.00
Other	4b4	2	0.00	0.00	0.00	0.00

Survey Questions 5a, 5b1, 5b2, 5b3, and 5b4. These questions collected annual military sanitation training times for a CF-1, CF-2, or CF-3 team member. Question 5a determined the total annual military sanitation training time, while the 5b questions compiled annual military sanitation training time in the following areas:

Question 5b1	Lecture and/or Demonstration
Question 5b2	Film
Question 5b3	Hands-on
Question 5b4	Other

Table 4-22 shows the military sanitation training times.

Table 4-22

## Military Sanitation Training Times - AAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	5a	2	2.50	2.12	4.00	1.00
Lecture/Demonst.	5b1	2	1.00	1.41	2.00	0.00
Films	5b2	2	1.50	0.71	2.00	1.00
Hands-on	5b3	2	0.00	0.00	0.00	0.00
Other	5b4	2	0.00	0.00	0.00	0.00

Survey Questions 6a, 6b1, 6b2, 6b3, and 6b4. Questions 6a through 6b4 collected annual expedient repairs training times for a CF-1, CF-2, or CF-3 team member. Question 6a determined total annual expedient repairs training time, while the 6b questions gathered annual expedient repairs training times in the following methods of instruction:

Question 6b1	Lecture and/or Demonstration
Question 6b2	Film
Question 6b3	Hands-on
Question 6b4	Other

Statistics for expedient method repairs training are presented in Table 4-23.

Survey Questions 7a, 7b1, 7b2, 7b3, and 7b4. These questions collected annual explosive ordnance reconnaissance (EOR) training times for a CF-1, CF-2, or CF-3 team member. Question 7a determined the annual EOR total training time, while the 7b questions collected annual EOR training times in the following areas:

Table 4-23

## Expedient Repair Training Times - AAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	6a	2	12.50	16.26	24.00	1.00
Lecture/Demonst.	6b1	2	4.00	5.66	8.00	0.00
Films	6b2	2	4.00	5.66	8.00	0.00
Hands-on	6b3	2	4.00	5.66	8.00	0.00
Other	6b4	2	0.50	0.71	1.00	0.00

Other = discussion by AFSC

Question 7b1      Lecture and/or Demonstration  
 Question 7b2      Film  
 Question 7b3      Hands-on  
 Question 7b4      Other

Table 4-24 shows the EDR training times.

Table 4-24

## Explosive Ordnance Reconnaissance Training Times - AAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	7a	2	5.50	6.36	10.00	1.00
Lecture/Demonst.	7b1	2	1.00	1.41	2.00	0.00
Films	7b2	2	1.50	0.71	2.00	1.00
Hands-on	7b3	2	3.00	4.24	6.00	0.00
Other	7b4	2	0.00	0.00	0.00	0.00

Survey Questions 8a, 8b1, 8b2, 8b3, and 8b4. These survey questions collected annual chemical warfare training times for a CF-1, CF-2, or CF-3 team member. Question 8a compiled annual total chemical warfare training times, while questions 8b1 through 8b4 collected annual chemical warfare training times for the following methods of instruction:

Question 8b1	Lecture and/or Demonstration
Question 8b2	Film
Question 8b3	Hands-on
Question 8b4	Other

Table 4-25 contains the chemical warfare training times.

Table 4-25

Chemical Warfare Training Times - AAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	8a	2	12.00	11.31	20.00	4.00
Lecture/Demonst.	8b1	2	2.00	0.00	2.00	2.00
Film	8b2	2	2.50	2.12	4.00	1.00
Hands-on	8b3	2	7.50	9.12	14.00	1.00
Other	8b4	2	0.00	0.00	0.00	0.00

Survey Questions 9a, 9b1, 9b2, 9b3, and 9b4. Questions 9a through 9b4 collected annual personal, convoy, and work party security training times for a CF-1, CF-2, or CF-3 team member. Question 9a determined the annual total security training time, while the 9b questions compiled annual security training times in the following areas:

Question 9b1	Lecture and/or Demonstration
Question 9b2	Film
Question 9b3	Hands-on
Question 9b4	Other

Table 4-26 presents the security training times.

Table 4-26

## Personal, Convoy, and Work Party Training Times - AAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	9a	2	36.00	39.60	64.00	8.00
Lecture/Demonst.	9b1	2	14.00	14.14	24.00	4.00
Film	9b2	2	4.00	5.66	8.00	0.00
Hands-on	9b3	2	18.00	19.80	32.00	4.00
Other	9b4	2	0.00	0.00	0.00	0.00

Survey Questions 10a, 10b1, 10b2, 10b3, and 10b4. These questions gathered annual Prime BEEF vehicle training times for equipment operators who were members of CF-1, CF-2, or CF-3 teams. Question 10a determined the annual total vehicle training time for equipment operators while the 10b questions collected annual vehicle training times for the following areas:

Question 10b1	Lecture and/or Demonstration
Question 10b2	Film
Question 10b3	Hands-on
Question 10b4	Other

Table 4-27 contains the annual vehicle training times for equipment operators.

Survey Questions 10c, 10d1, 10d2, 10d3, and 10d4. These questions collected annual Prime BEEF vehicle training times for a CF-1, CF-2, or CF-3 team member who was not an equipment operator. Question 10c determined the annual total vehicle training time for a

Table 4-27

## Vehicle Training Times for Equipment Operators - AAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10a	2	0.00	0.00	0.00	0.00
Lecture/Demonst.	10b1	2	0.00	0.00	0.00	0.00
Film	10b2	2	0.00	0.00	0.00	0.00
Hands-on	10b3	2	0.00	0.00	0.00	0.00
Other	10b4	2	0.00	0.00	0.00	0.00

nonequipment operator while questions 10d1 through 10d2 compiled annual vehicle training times in the following areas:

Question 10d1	Lecture and/or Demonstration
Question 10d2	Film
Question 10d3	Hands-on
Question 10d4	Other

Table 4-28 shows the vehicle training times for personnel who were not equipment operators.

Table 4-28

## Vehicle Training Times for Nonequipment Operators - AAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10c	2	20.00	28.28	40.00	0.00
Lecture/Demonst.	10d1	2	4.00	5.66	8.00	0.00
Film	10d2	2	0.00	0.00	0.00	0.00
Hands-on	10d3	2	16.00	22.63	32.00	0.00
Other	10d4	2	0.00	0.00	0.00	0.00

Survey Questions 11a, 11b1, 11b2, 11b3, and 11b4. Questions 11a through 11b4 collected annual war reserve material (WRM) field equipment training times for a CF-1, CF-2, or CF-3 team member. Question 11a determined the annual total WRM field equipment training time, while questions 11b1 through 11b4 gathered annual WRM field equipment training times in the following methods of training:

Question 11b1	Lecture and/or Demonstration
Question 11b2	Film
Question 11b3	Hands-on
Question 11b4	Other

Table 4-29 contains the annual WRM field equipment training times.

Table 4-29

WRM Field Equipment Training Times - AAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	11a	2	9.00	1.41	10.00	8.00
Lecture/Demonst.	11b1	2	1.00	0.00	1.00	1.00
Film	11b2	2	1.00	0.00	1.00	1.00
Hands-on	11b3	2	7.00	1.41	8.00	6.00
Other	11b4	2	0.00	0.00	0.00	0.00

Computed Variables. The variables of summation total time, summation lecture and/or demonstration, summation film, summation hands-on, and summation other were calculated by the computer using COMPUTE statements. The computed variable, summation total time, shows the total training time a CF-1, CF-2, or CF-3 team member receives annually and was calculated by adding questions 3a, 4a, 5a, 6a, 7a, 8a, 9a, 10c,



and 11a. The remaining computed variables show how much of the total annual training time was spent in different methods of instruction: lecture and/or demonstration, film, hands-on, and other methods of instruction. Computed variables, summation lecture and/or demonstration, summation film, summation hands-on, and summation other, were calculated using the following equations:

$$\text{summation lecture and/or demonstration} = 3b1+4b1+5b1+6b1+7b1+8b1+9b1+10d1+11b1$$

$$\text{summation film} = 3b2+4b2+5b2+6b2+7b2+8b2+9b2+10d2+11b2$$

$$\text{summation hands-on} = 3b3+4b3+5b3+6b3+7b3+8b3+9b3+10d3+11b3$$

$$\text{summation other} = 3b4+4b4+5b4+6b4+7b4+8b4+9b4+10d4+11b4$$

Table 4-30 contains the computed variables annual training times.

Table 4-30

Summation of Training Times - AAC

Training Times (hours)	N	Mean	Standard Deviation	Maximum	Minimum
Summation Total	2	105.50	106.77	181.00	30.00
Summation Lecture/Demon.	2	29.50	30.41	51.00	8.00
Summation Film	2	16.50	14.85	27.00	6.00
Summation Hands-on	2	59.00	62.22	103.00	15.00
Summation Other	2	0.50	0.71	1.00	0.00

Survey Question 12a. Question 12a identified the annual number of days a CF-1, CF-2, or CF-3 team member spent on field bivouac. Table 4-31 lists the number of days spent on field bivouac.

Table 4-31

## Days Spent on Bivouac - AAC

	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Days on Bivouac	12a	2	33.00	35.35	58.00	8.00

Survey Question 12b. Question 12b identified whether the annual field bivouac was held on, off, or on and off the base. Table 4-32 lists where the field bivouac was held.

Table 4-32

## Location of Annual Field Bivouac - AAC

Bivouac	Number	Bases
		Percent
On and Off Base	2	100.0
Total	<u>2</u>	

Survey Question 12c. Question 12c identified organizations which participated in and/or supported the annual field bivouac. Participate and support were defined in the survey questionnaire as shown below:

Participate	Act as instructors, aggressors; or train with civil engineering personnel.
Support	Provide vehicles, equipment, supplies, or personnel such as medics to support the bivouac.

Table 4-33 shows the organizations which participate in or support the annual field bivouac.

Table 4-33

## Organizations Which Participate In or Support Bivouac - AAC

(N = 10 Bases) Organization	Participate		Support	
	Number	Percent	Number	Percent
Security Police	1	50.0	1	50.0
Hospital/Medical Center	1	50.0	1	50.0
Disaster Preparedness	1	50.0	0	0.0
Transportation	1	50.0	2	100.0
Supply	0	0.0	1	50.0
Food Services	0	0.0	1	50.0
Explosive Ordnance Det.	0	0.0	0	0.0
Air Force Reserve	0	0.0	0	0.0
Air National Guard	0	0.0	0	0.0
Army	2	100.0	1	50.0
Army Reserve	0	0.0	0	0.0
Army National Guard	1	50.0	0	0.0
Navy	0	0.0	0	00.0
Navy Reserves	0	0.0	0	00.0
Marines	0	0.0	0	0.0
Marine Reserves	0	0.0	0	0.0
Others	0	0.0	0	0.0

Team Equipment Data

Survey Questions 13a1, 13a2, 13a3, and 13a4. Questions 13a1 through 13a4 identified how many bases had contingency support sets (CSS), Home Station training sets (HSTS), CF-2 team kits, and RRR mini-kits. Table 4-34 shows how many bases have contingency support sets, Home Station training sets, CF-2 team kits and RRR mini-kits.

Survey Questions 13b, 13c, 13d, and 13e. These questions identified what percentage of equipment was missing from the contingency support sets, Home Station training sets, CF-2 team kits, and RRR mini-kits. Table 4-35 lists the percentage of team equipment missing.

Table 4-34

## Number of Bases With BEEF Team Equipment - AAC

Team Equipment	N	Bases With Team Equipment	
		Number	Percent
CSS	2	2	100.0
HSTS	2	1	50.0
CF-2 Team kit	2	2	100.0
RRR mini-kit	2	2	100.0

Table 4-35

## Percentage Missing From Prime BEEF Team Equipment - AAC

Team Equipment	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
CSS	13b	2	4.50	6.36	9.00	0.00
HSTS	13c	1	25.00	0.00	25.00	25.00
CF-2 Team Kit	13d	2	5.00	7.07	10.00	0.00
RRR Mini-Kit	13e	2	35.00	7.07	40.00	30.00

Pacific Air Command

This section presents descriptive statistics for PACAF. Population statistics are presented first, followed by statistics of Home Station training and Prime BEEF team Equipment.

Population Data

Survey Questions 1 and 2. Table 4-36 shows the number of surveys mailed to PACAF bases, the number of PACAF bases which responded,

and how many of the respondents have Prime BEEF CF-1, CF-2, or CF-3 teams.

Table 4-36

PACAF Population Data

(Population = 3)	Survey Question	
	Number	Number
Bases which responded	1	3
Respondents which have CF or PB 1, 2, or 3 teams	2	3
PACAF survey return rate = 100.0%		

Home Station Training Data

Survey Questions 3a, 3b1, 3b2, 3b3, and 3b4. Questions 3a, 3b1, 3b2, 3b3, and 3b4 collected annual Rapid Runway Repair (RRR) training times (hours) for a CF-1, CF-2, or CF-3 team member. Question 3a determined the total annual RRR training time for a CF-1, CF-2, or CF-3 team member, while questions 3b1 through 3b4 compiled annual RRR training times for a team member in the following methods of instruction:

Question 3b1	Lecture and/or Demonstration
Question 3b2	Film
Question 3b3	Hands-on
Question 3b4	Other

Table 4-37 shows the RRR training times for the PACAF bases.

Survey Questions 4a, 4b1, 4b2, 4b3, and 4b4. These questions collected annual weapons training times for a CF-1, CF-2, or CF-3 team member. Question 4a determined the annual total weapons training time, while questions 4b1 through 4b4 gathered weapons training time in the following categories:

Table 4-37

## RRR Training Times - PACAF

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	3a	3	7.67	6.51	14.00	1.00
Lecture/Demonst.	3b1	3	1.00	1.00	2.00	0.00
Films	3b2	3	1.33	0.58	2.00	1.00
Hands-on	3b3	3	5.33	6.11	12.00	0.00
Other	3b4	2	0.00	0.00	0.00	0.00

Question 4b1      Lecture and/or Demonstration  
 Question 4b2      Films  
 Question 4b3      Hands-on  
 Question 4b4      Other

Table 4-38 shows the weapons training times.

Table 4-38

## Weapons Training Times - PACAF

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	4a	3	6.00	2.82	8.00	4.00
Lecture/Demonst.	4b1	3	1.50	0.71	2.00	1.00
Films	4b2	3	1.00	1.41	2.00	0.00
Hands-on	4b3	3	3.50	0.71	4.00	3.00
Other	4b4	3	0.00	0.00	0.00	0.00

Survey Questions 5a, 5b1, 5b2, 5b3, and 5b4. These questions collected annual military sanitation training times for a CF-1, CF-2, or

CF-3 team member. Question 5a determined the total annual military sanitation training time while the 5b questions compiled annual military sanitation training time in the following areas:

Question 5b1	Lecture and/or Demonstration
Question 5b2	Film
Question 5b3	Hands-on
Question 5b4	Other

Table 4-39 shows the military sanitation training times.

Table 4-39  
Military Sanitation Training Times - PACAF

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	5a	3	5.00	1.73	6.00	3.00
Lecture/Demonst.	5b1	3	2.00	1.00	3.00	1.00
Films	5b2	3	1.00	1.00	2.00	0.00
Hands-on	5b3	3	2.00	2.00	4.00	0.00
Other	5b4	3	0.00	0.00	0.00	0.00

Survey Questions 6a, 6b1, 6b2, 6b3, and 6b4. Questions 6a through 6b4 collected annual expedient repairs training times for a CF-1, CF-2, or CF-3 team member. Question 6a determined total annual expedient repairs training time while the 6b questions gathered annual expedient repairs training times in the following methods of instruction:

Question 6b1	Lecture and/or Demonstration
Question 6b2	Film
Question 6b3	Hands-on
Question 6b4	Other

Statistics for expedient repairs training are presented in Table 4-40.

Table 4-40

## Expedient Repair Training Times - PACAF

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	6a	3	10.67	8.33	20.00	4.00
Lecture/Demonst.	6b1	3	3.33	3.21	7.00	1.00
Films	6b2	3	0.67	0.58	1.00	0.00
Hands-on	6b3	3	6.67	5.69	13.00	2.00
Other	6b4	3	0.00	0.00	0.00	0.00

Survey Questions 7a, 7b1, 7b2, 7b3, and 7b4. These questions collected annual explosive ordnance reconnaissance (EOR) training times for a CF-1, CF-2, or CF-3 team member. Question 7a determined the annual EOR total training time, while the 7b questions collected annual EOR training times in the following areas:

Question 7b1	Lecture and/or Demonstration
Question 7b2	Film
Question 7b3	Hands-on
Question 7b4	Other

Table 4-41 shows the EOR training times.

Survey Questions 8a, 8b1, 8b2, 8b3, and 8b4. These survey questions collected annual chemical warfare training times for a CF-1, CF-2, or CF-3 team member. Question 8a compiled annual total chemical warfare training times while questions 8b1 through 8b4 collected annual chemical warfare training times for the following areas:

Question 8b1	Lecture and/or Demonstration
Question 8b2	Film
Question 8b3	Hands-on
Question 8b4	Other

Table 4-42 contains the chemical warfare training times.



Table 4-41

## Explosive Ordnance Reconnaissance Training Times - PACAF

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	7a	3	3.67	0.58	4.00	3.00
Lecture/Demonst.	7b1	3	2.33	1.15	3.00	1.00
Films	7b2	3	0.67	0.58	1.00	0.00
Hands-on	7b3	3	0.67	1.15	2.00	0.00
Other	7b4	3	0.00	0.00	0.00	0.00

Table 4-42

## Chemical Warfare Training Times - PACAF

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	8a	3	16.00	4.00	20.00	12.00
Lecture/Demonst.	8b1	3	6.67	4.62	12.00	4.00
Film	8b2	3	2.00	2.00	4.00	0.00
Hands-on	8b3	3	7.33	5.03	12.00	2.00
Other	8b4	2	0.00	0.00	0.00	0.00

Survey Questions 9a, 9b1, 9b2, 9b3, and 9b4. Questions 9a through 9b4 collected annual personal, convoy, and work party security training times for a CF-1, CF-2, or CF-3 team member. Question 9a determined the annual total security training time, while the 9b questions compiled annual security training times in the following areas:

Question 9b1	Lecture and/or Demonstration
Question 9b2	Film
Question 9b3	Hands-on
Question 9b4	Other

Table 4-43 presents the security training times.

Table 4-43

Personal, Convoy, and Work Party Training Times - PACAF

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	9a	3	22.00	24.58	50.00	4.00
Lecture/Demonst.	9b1	3	8.67	9.81	20.00	3.00
Film	9b2	3	1.00	1.73	3.00	0.00
Hands-on	9b3	3	12.33	15.50	30.00	1.00
Other	9b4	3	0.00	0.00	0.00	0.00

Survey Questions 10a, 10b1, 10b2, 10b3, and 10b4. These questions gathered annual Prime BEEF vehicle training times for equipment operators who were members of CF-1, CF-2, or CF-3 teams. Question 10a determined the annual total vehicle training time for equipment operators while the 10b questions collected annual vehicle training times for the following areas:

Question 10b1	Lecture and/or Demonstration
Question 10b2	Film
Question 10b3	Hands-on
Question 10b4	Other

Table 4-44 contains the vehicle training times for equipment operators.

Survey Questions 10c, 10d1, 10d2, 10d3, and 10d4. These questions collected annual Prime BEEF vehicle training times for a CF-1, CF-2, or CF-3 team member who was not an equipment operator. Question

Table 4-44

## Vehicle Training Times for Equipment Operators - PACAF

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10a	2	8.50	10.61	16.00	1.00
Lecture/Demonst.	10b1	2	0.00	0.00	0.00	0.00
Film	10b2	2	0.00	0.00	0.00	0.00
Hands-on	10b3	2	8.50	10.61	16.00	1.00
Other	10b4	2	0.00	0.00	0.00	0.00

10c determined the annual total vehicle training time for a nonequipment operator, while questions 10d1 through 10d2 compiled annual vehicle training times in the following areas:

Question 10d1	Lecture and/or Demonstration
Question 10d2	Film
Question 10d3	Hands-on
Question 10d4	Other

Table 4-45 shows the vehicle training times for personnel who were not equipment operators.

Survey Questions 11a, 11b1, 11b2, 11b3, and 11b4. Questions 11a through 11b4 collected annual war reserve material (WRM) field equipment training times for a CF-1, CF-2, or CF-3 team member. Question 11a determined the annual total WRM field equipment training time while questions 11b1 through 11b4 gathered annual WRM field equipment training times in the following methods of training:

Question 11b1	Lecture and/or Demonstration
Question 11b2	Film
Question 11b3	Hands-on
Question 11b4	Other

Table 4-46 contains the annual WRM field equipment training times.

Table 4-45

## Vehicle Training Times for Nonequipment Operators - PACAF

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10c	3	3.67	2.52	6.00	1.00
Lecture/Demonst.	10d1	3	0.33	0.58	1.00	0.00
Film	10d2	3	0.33	0.58	1.00	0.00
Hands-on	10d3	3	3.00	2.65	6.00	1.00
Other	10d4	3	0.00	0.00	0.00	0.00

Table 4-46

## WRM Field Equipment Training Times - PACAF

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	11a	3	6.67	5.03	12.00	2.00
Lecture/Demonst.	11b1	3	1.00	1.00	2.00	0.00
Film	11b2	3	1.00	1.00	2.00	0.00
Hands-on	11b3	3	4.67	4.16	8.00	0.00
Other	11b4	3	0.00	0.00	0.00	0.00

Computed Variables. The variables of summation total time, summation lecture and/or demonstration, summation film, summation hands-on, and summation other were calculated by the computer using COMPUTE statements. The computed variable, summation total time, shows the total training time a CF-1, CF-2, or CF-3 team member receives annually and was calculated by adding questions 3a, 4a, 5a, 6a, 7a, 8a, 9a, 10c,

and 11a. The remaining computed variables show how much of the total annual training time was spent in different methods of instruction: lecture and/or demonstration, film, hands-on, and other methods of instruction. Computed variables, summation lecture and/or demonstration, summation film, summation hands-on, and summation other, were calculated using the following equations:

$$\text{summation lecture and/or demonstration} = 3b1+4b1+5b1+6b1+7b1+8b1+9b1+10d1+11b1$$

$$\text{summation film} = 3b2+4b2+5b2+6b2+7b2+8b2+9b2+10d2+11b2$$

$$\text{summation hands-on} = 3b3+4b3+5b3+6b3+7b3+8b3+9b3+10d3+11b3$$

$$\text{summation other} = 3b4+4b4+5b4+6b4+7b4+8b4+9b4+10d4+11b4$$

Table 4-47 contains the computed variables annual training times.

Table 4-47

Summation of Training Times - PACAF

Training Times (hours)	N	Mean	Standard Deviation	Maximum	Minimum
Summation Total	3	79.33	19.55	101.00	63.00
Summation Lecture/Demon.	3	26.33	10.50	37.00	16.00
Summation Film	3	8.67	7.51	16.00	1.00
Summation Hands-on	3	44.33	17.62	63.00	28.00
Summation Other	3	0.00	0.00	0.00	0.00

Survey Question 12a. Question 12a identified the annual number of days a CF or PB 1, 2, or 3 team member spent on field bivouac. Table 4-48 lists the number of days spent on field bivouac.

Table 4-48

## Days Spent on Bivouac - PACAF

	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Days on Bivouac	12a	3	4.33	1.15	5.00	3.00

Survey Question 12b. Question 12b identified whether the annual field bivouac was held on or off the base. Table 4-49 lists where the field bivouac was held.

Table 4-49

## Location of Annual Field Bivouac - PACAF

Bivouac	Number	Bases
		Percent
Off Base	3	100.0
Total	<u>3</u>	

Survey Question 12c. Question 12c identified organizations which participated in and/or supported the annual field bivouac. Participate and support were defined in the survey questionnaire as shown below:

Participate      Act as instructors, aggressors; or train with civil engineering personnel.

Support            Provide vehicles, equipment, supplies, or personnel such as medics to support the bivouac.

Table 4-50 shows the organizations which participate in or support the annual field bivouac.

Table 4-50

## Organizations Which Participate In or Support Bivouac - PACAF

(N = 10 Bases) Organization	Participate		Support	
	Number	Percent	Number	Percent
Security Police	2	66.7	1	33.3
Hospital/Medical Center	1	33.3	2	66.7
Disaster Preparedness	0	0.0	2	66.7
Transportation	0	0.0	3	100.0
Supply	0	0.0	3	100.0
Food Services	1	33.3	2	66.7
Explosive Ordnance Det.	3	100.0	1	33.3
Air Force Reserve	0	0.0	0	0.0
Air National Guard	0	0.0	0	0.0
Army	0	0.0	0	0.0
Army Reserve	0	0.0	0	0.0
Army National Guard	0	0.0	0	0.0
Navy	0	0.0	0	0.0
Navy Reserves	0	0.0	0	0.0
Marines	0	0.0	0	0.0
Marine Reserves	0	0.0	0	0.0
Others	1	33.3	*1	33.3
Others who participate		*Others who support		
DOD Guards	Chaplain	Chaplain	Commo. Group	
Commo. Group		Audio Visual	DOD Guards	
* One base reported all four organizations				

Team Equipment Data

Survey Questions 13a1, 13a2, 13a3, and 13a4. Questions 13a1 through 13a4 identified how many bases had contingency support sets (CSS), Home Station training sets (HSTS), CF-2 team kits, and RRR mini-kits. Table 4-51 shows how many bases have contingency support sets, Home Station training sets, CF-2 team kits and RRR mini-kits.

Survey Questions 13b, 13c, 13d, and 13e. These questions identified what percentage of equipment was missing from the

Table 4-51

## Number of Bases With BEEF Team Equipment - PACAF

Team Equipment	N	Bases With Team Equipment	
		Number	Percent
CSS	3	3	100.0
HSTS	3	1	33.3
CF-2 Team Kit	3	3	100.0
RRR mini-kit	3	3	100.0

contingency support sets, Home Station training sets, CF-2 team kits, and RRR mini-kits. Table 4-52 lists the percentages of team equipment missing.

Table 4-52

## Percentage Missing From Prime BEEF Team Equipment - PACAF

Team Equipment	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
CSS	13b	3	70.00	30.00	100.00	40.00
HSTS	13c	1	100.00	0.00	100.00	100.00
CF-2 Team Kit	13d	3	38.00	52.43	98.00	1.00
RRR Mini-Kit	13e	3	35.00	43.31	85.00	10.00

U.S. Air Forces Europe

This section presents descriptive statistics for USAFE. Population statistics will be presented first, followed by statistics of Home Station training, and Prime BEEF team equipment. Lastly, statistics on USAFE's rapid runway repair teams are presented.



### Population Data

Survey Questions 1 and 2. Table 4-53 shows the number of surveys mailed to USAFE bases, the number of USAFE bases which responded by command, and how many of the respondents have Prime BEEF Mobile teams. Surveys were mailed only to bases identified by USAFE's draft supplement to AFR 93-3 as having Prime BEEF mobile teams. Two respondents stated that their base did not have a mobile team.

Table 4-53

#### USAFE Population Data

(Population = 8) Command	Surveys Returned		Respondents With
	Number	Percent	Mobile Team Number
17th Air Force	4	66.7	3
16th Air Force	2	33.3	1
Total	6		4
USAFE survey return rate = 75.0%			

### Home Station Training Data

Survey Questions 3a, 3b1, 3b2, 3b3, and 3b4. Questions 3a, 3b1, 3b2, 3b3, and 3b4 collected annual Rapid Runway Repair (RRR) training times (hours) for a Prime BEEF mobile team member. Question 3a determined the total annual RRR training time for a mobile team member while questions 3b1 through 3b4 compiled annual RRR training times for a team member in the following methods of instruction:

Question 3b1	Lecture and/or Demonstration
Question 3b2	Film
Question 3b3	Hands-on
Question 3b4	Other

Table 4-54 shows the RRR training times for the USAFE bases.

Table 4-54

RRR Training Times for Mobile Team - USAFE

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	3a	4	27.25	46.01	96.00	1.00
Lecture/Demonst.	3b1	4	3.50	5.69	12.00	0.00
Films	3b2	4	0.75	0.50	1.00	0.00
Hands-on	3b3	4	23.00	40.22	83.00	0.00
Other	3b4	4	0.00	0.00	0.00	0.00

Survey Questions 4a, 4b1, 4b2, 4b3, and 4b4. These questions collected annual weapons training times for a Prime BEEF mobile team member. Question 4a determined the annual total weapons training time, while questions 4b1 through 4b4 gathered weapons training time in the following categories:

Question 4b1	Lecture and/or Demonstration
Question 4b2	Films
Question 4b3	Hands-on
Question 4b4	Other

Table 4-55 shows the annual weapons training times.

Survey Questions 5a, 5b1, 5b2, 5b3, and 5b4. These questions collected annual military sanitation training times for a Prime BEEF mobile team member. Question 5a determined the total annual military

Table 4-55

## Weapons Training Times - USAFE

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	4a	4	6.00	1.63	8.00	4.00
Lecture/Demonst.	4b1	4	2.87	0.85	4.00	2.00
Films	4b2	4	0.12	0.25	0.50	0.00
Hands-on	4b3	4	3.00	1.08	4.00	1.50
Other	4b4	4	0.00	0.00	0.00	0.00

sanitation training time, while the 5b questions compiled annual military sanitation training time in the following areas:

Question 5b1	Lecture and/or Demonstration
Question 5b2	Film
Question 5b3	Hands-on
Question 5b4	Other

Table 4-56 shows the annual military sanitation training times.

Table 4-56

## Military Sanitation Training Times - USAFE

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	5a	4	2.15	2.66	6.00	0.00
Lecture/Demonst.	5b1	4	1.25	1.89	4.00	0.00
Films	5b2	4	0.37	0.48	1.00	0.00
Hands-on	5b3	4	0.50	1.00	2.00	0.00
Other	5b4	4	0.00	0.00	0.00	0.00

Survey Questions 6a, 6b1, 6b2, 6b3, and 6b4. These questions collected annual expedient repairs training times for a Prime BEEF mobile team member. Question 6a determined total annual expedient repairs training time, while the 6b questions gathered annual expedient repairs training times in the following methods of instruction:

Question 6b1	Lecture and/or Demonstration
Question 6b2	Film
Question 6b3	Hands-on
Question 6b4	Other

Statistics for expedient repairs training are presented in Table 4-57.

Table 4-57  
Expedient Repair Training Times - USAFE

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	6a	4	4.75	5.25	12.00	0.00
Lecture/Demonst.	6b1	4	1.75	2.87	6.00	0.00
Films	6b2	4	0.25	0.50	1.00	0.00
Hands-on	6b3	4	2.75	3.20	6.00	0.00
Other	6b4	4	0.00	0.00	0.00	0.00

Survey Questions 7a, 7b1, 7b2, 7b3, and 7b4. These questions collected annual explosive ordnance reconnaissance (EOR) training times for a Prime BEEF mobile team member. Question 7a determined the annual EOR total training time while the 7b questions collected annual EOR training times in the following areas:

Question 7b1	Lecture and/or Demonstration
Question 7b2	Film
Question 7b3	Hands-on
Question 7b4	Other

Table 4-58 shows the EOR training times.

Table 4-58

## Explosive Ordnance Reconnaissance Training Times - USAFE

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	7a	4	11.12	21.25	43.00	0.00
Lecture/Demonst.	7b1	4	7.50	15.00	30.00	0.00
Films	7b2	4	0.62	0.48	1.00	0.00
Hands-on	7b3	4	3.00	6.00	12.00	0.00
Other	7b4	4	0.00	0.00	0.00	0.00

Survey Questions 8a, 8b1, 8b2, 8b3, and 8b4. These survey questions collected annual chemical warfare training times for a Prime BEEF mobile team member. Question 8a compiled annual total chemical warfare training times while questions 8b1 through 8b4 collected annual chemical warfare training times for the following methods of instruction:

Question 8b1	Lecture and/or Demonstration
Question 8b2	Film
Question 8b3	Hands-on
Question 8b4	Other

Table 4-59 contains the chemical warfare training times.

Survey Questions 9a, 9b1, 9b2, 9b3, and 9b4. Questions 9a through 9b4 collected annual personal, convoy, and work party security training times for a Prime BEEF mobile team member. Question 9a determined the annual total security training time while the 9b questions compiled annual security training times in the following methods of instruction:

Table 4-59

## Chemical Warfare Training Times - USAFE

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	8a	4	17.50	18.06	42.00	2.00
Lecture/Demonst.	8b1	4	2.25	0.96	3.00	1.00
Film	8b2	4	1.75	0.96	3.00	1.00
Hands-on	8b3	4	13.50	16.60	36.00	0.00
Other	8b4	4	0.00	0.00	0.00	0.00

Question 9b1      Lecture and/or Demonstration  
 Question 9b2      Film  
 Question 9b3      Hands-on  
 Question 9b4      Other

Table 4-60 presents the annual security training times.

Table 4-60

## Personal, Convoy, and Work Party Training Times - USAFE

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	9a	4	3.25	5.85	12.00	0.00
Lecture/Demonst.	9b1	4	2.25	3.86	8.00	0.00
Film	9b2	4	0.25	0.50	1.00	0.00
Hands-on	9b3	4	0.75	1.50	3.00	0.00
Other	9b4	4	0.00	0.00	0.00	0.00

Survey Questions 10c, 10d1, 10d2, 10d3, and 10d4. These questions collected annual Prime BEEF vehicle training times for a

Prime BEEF mobile team member who was not an equipment operator.

Question 10c determined the annual total vehicle training time for a nonequipment operator while questions 10d1 through 10d2 compiled annual vehicle training times in the following areas:

Question 10d1	Lecture and/or Demonstration
Question 10d2	Film
Question 10d3	Hands-on
Question 10d4	Other

Table 4-61 shows the vehicle training times for personnel who were not equipment operators.\*

Table 4-61

Vehicle Training Times for Nonequipment Operators - USAFE

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10a	4	3.50	5.69	12.00	0.00
Lecture/Demonst.	10b1	4	0.00	0.00	0.00	0.00
Film	10b2	4	0.00	0.00	0.00	0.00
Hands-on	10b3	4	3.50	5.69	12.00	0.00
Other	10b4	4	0.00	0.00	0.00	0.00

Survey Questions 11a, 11b1, 11b2, 11b3, and 11b4. Questions 11a through 11b4 collected annual war reserve material (WRM) field equipment training times for a Prime BEEF mobile team member. Question 11a determined the annual total WRM field equipment training time, while questions 11b1 through 11b4 gathered annual WRM field equipment training

\* Vehicle training times for equipment operators is not presented for mobile team members because equipment operators are not assigned to mobile teams (29:8,9).

times in the following methods of training:

Question 11b1	Lecture and/or Demonstration
Question 11b2	Film
Question 11b3	Hands-on
Question 11b4	Other

Table 4-62 contains the annual WRM field equipment training times.

Table 4-62

WRM Field Equipment Training Times - USAFE

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	11a	4	10.00	12.00	24.00	0.00
Lecture/Demonst.	11b1	4	4.00	8.00	16.00	0.00
Film	11b2	4	0.00	0.00	0.00	0.00
Hands-on	11b3	4	6.00	7.66	16.00	0.00
Other	11b4	4	0.00	0.00	0.00	0.00

Computed Variables. The variables of summation total time, summation lecture and/or demonstration, summation film, summation hands-on, and summation other were calculated by the computer using COMPUTE statements. The computed variable, summation total time, shows the total training time a mobile team member receives annually and was calculated by adding questions 3a, 4a, 5a, 6a, 7a, 8a, 9a, 10c, and 11a. The remaining computed variables show how much of the total annual training time was spent in different methods of instruction: lecture and/or demonstration, film, hands-on, and other methods of instruction. Computed variables, summation lecture and/or demonstration, summation film, summation hands-on, and summation other, were calculated using the



following equations:

$$\text{summation lecture and/or demonstration} = 3b1+4b1+5b1+6b1+7b1+8b1+9b1+10d1+11b1$$

$$\text{summation film} = 3b2+4b2+5b2+6b2+7b2+8b2+9b2+10d2+11b2$$

$$\text{summation hands-on} = 3b3+4b3+5b3+6b3+7b3+8b3+9b3+10d3+11b3$$

$$\text{summation other} = 3b4+4b4+5b4+6b4+7b4+8b4+9b4+10d4+11b4$$

Table 4-63 contains the computed variables annual training times.

Table 4-63

Summation of Training Times - USAFE

Training Times (hours)	N	Mean	Standard Deviation	Maximum	Minimum
Summation Total	4	85.50	100.61	231.00	14.50
Summation Lecture/Demon.	4	25.37	36.52	80.00	4.50
Summation Film	4	4.12	2.43	6.50	1.00
Summation Hands-on	4	56.00	63.70	145.50	5.00
Summation Other	4	0.00	0.00	0.00	0.00

Survey Question 12a. Question 12a identified the annual number of days a Prime BEEF mobile team member spent on field bivouac. Table 4-64 lists the number of days spent on field bivouac.

Survey Question 12b. Question 12b identified whether the annual field bivouac was accomplished by deploying to Ramstein AB, Germany, or by deploying in support of an exercise. Table 4-65 shows whether the bivouac was conducted at Ramstein AFB or by deploying in support of an exercise.

Table 4-64

## Days Spent on Bivouac - USAFE

	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Days on Bivouac	12a	4	55.50	37.83	95.00	17.00

Table 4-65

## Location of Annual Field Bivouac - USAFE

Location	Number	Bases
		Percent
Ramstein AFB	4	100.0
Total	4	

Team Equipment Data

Survey Questions 13a1, 13a2, 13a3, and 13a4. Questions 13a1 through 13a4 identified how many bases have contingency support sets (CSS), and CF-2 team kits. Table 4-66 shows how many bases have contingency support sets, and CF-2 team kits. USAFE does not have Home Station Training Kits or RRR mini-kits.

Table 4-66

## Number of Bases With BEEF Team Equipment - USAFE

Team Equipment	N	Bases With Team Equipment	
		Number	Percent
CSS	4	4	100.0
CF-2 Team kit	4	4	100.0

Survey Questions 13b, 13c, 13d, and 13e. These questions identified what percentage of equipment was missing from the contingency support sets, and CF-2 team kits. Table 4-67 lists the amounts of team equipment missing.

Table 4-67

Percentage Missing From Prime BEEF Team Equipment - USAFE

From Prime BEEF Team Equipment - USAFE						
Team Equipment	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
CSS	13b	4	7.50	7.72	18.00	0.00
CF-2 Team Kit	13c	4	5.50	5.20	12.00	0.00

Rapid Runway Repair Team Data

The following data presents survey population information, RRR training times, and government vehicle training times for USAFE RRR team members.

Survey Question 14. Question 14 identified the number of respondents which have rapid runway repair teams. Table 4-68 lists this information.

Table 4-68

Number of Respondents With RRR Team - USAFE

(N = 6 returned surveys)	Number
Respondents With RRR Team	4

Survey Questions 15a, 15b1, 15b2, 15b3, and 15b4. Questions 15a through 15b4 collected RRR training times for RRR team members. Question 15a determined the total annual RRR training time, while questions 15b1 through 15b4 compiled annual RRR training times in the following methods of instruction:

Question 15b1	Lecture and/or Demonstration
Question 15b2	Film
Question 15b3	Hands-on
Question 15b4	Other

Table 4-69 contains the RRR training times for USAFE RRR team members.

Table 4-69

RRR Training Times for RRR Team - USAFE

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	15a	4	35.00	20.82	60.00	10.00
Lecture/Demonst.	15b1	4	3.12	4.59	10.00	0.50
Films	15b2	4	0.37	0.48	1.00	0.00
Hands-on	15b3	4	29.00	14.40	40.00	9.00
Other	15b4	4	2.50	5.00	10.00	0.00

Other = locally produced videotape

Survey Questions 16a through 16b4. These questions gathered annual Prime BEEF vehicle training times for equipment operators who were members of RRR teams. Question 16a determined the annual total vehicle training time for equipment operators while the 16b questions collected annual vehicle training times for the following areas:

Question 16b1	Lecture and/or Demonstration
Question 16b2	Film
Question 16b3	Hands-on
Question 16b4	Other

Table 4-70 contains the annual vehicle training times for equipment operators.

Table 4-70

Vehicle Training Times for Equipment Operators - USAFE RRR Teams

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	16a	4	30.25	21.14	50.00	1.00
Lecture/Demonst.	16b1	4	0.12	0.25	0.50	0.00
Film	16b2	4	0.12	0.25	0.50	0.00
Hands-on	16b3	4	30.00	20.99	50.00	1.00
Other	16b4	4	0.00	0.00	0.00	0.00

Section C: Comments From Respondents

The two questionnaires used in this research requested factual data which could be obtained from training records. Opinions were not solicited from respondents. However, the following comments were written on the returned questionnaires.

Insufficient training is given. A one night bivouac is not enough - we also need equipment to train with.

Recommend each command be tasked to conduct an internal Prime BEEF managers conference to establish training requirements, lesson plans, and standards. In turn the center (AFESC) would host a conference of command P.B. managers to compile information and instruction packages that would standardize our P.B. program Air Force wide!

Thank you for allowing me to participate. But I can't help that I feel the surface is just being scratched by not knowing more of the objectives/goals to be achieved.

We have a model of an air base which we use to show EOR, RRR, and BDR operations. This setup has buildings, RRR vehicles, and aircraft. It helps us to show how P.B. teams are supposed to work.

#### Summary

This chapter presented the results of two questionnaires which gathered Prime BEEF Home Station training, and equipment data from CONUS and nonCONUS civil engineering units. The CONUS results were combined for presentation; however, because the nonCONUS commands had different Prime BEEF organizations, their results were presented by command. Finally, comments written on the returned questionnaires were presented.

## V. Analysis and Discussion

### Overview

This chapter analyzes and discusses the data collected by the two survey questionnaires. Each research question, stated in chapter I, is analyzed separately. Finally, the results of this research are compared to previous studies, regulations, pamphlets, and reports discussed in chapter II where applicable.

The training times presented in this chapter are from chapter IV and Appendix L; and are, where outliers were involved, the training times without the outlier values. As stated in Chapter III, the training times without the outlier values more accurately represent the true training times. However, the use of training times without outliers may cause the reader to believe there are "discrepancies" with the data presented in this chapter, because inconsistencies may appear to exist in some tables. Examples of "discrepancies" are presented in detail for table 5-26 and conclusion 3 in Chapter VI.

### Research Question 1

Annually, how much time does an individual at base level (CONUS) spend training in the Home Station training program?

A CF-1, CF-2, or CF-3 team member, who is not an equipment operator, trains 50.53 hours per year in Home Station training requirements. The 50.53 hours includes the following training subjects:

1. Rapid runway repair
2. Weapons
3. Military sanitation

4. Government vehicle operation
5. Expedient repair methods
6. Explosive ordnance reconnaissance
7. Chemical warfare
8. Personal, work party, and convoy security
9. War reserve material field equipment

Table 5-1 shows the Home Station training times.

Table 5-1

Annual Home Station Training Program Times

Command	N	Training Times (hours)		
		Mean	Maximum	Minimum
Combined CONUS	74	50.53	215.00	13.34

A year has 52 weeks. Subtracting four weeks for an individual's annual leave and another two weeks for holidays leaves 46 weeks of potentially productive time: 46 weeks times 40 hours per week equals 1,840 work hours per year.

$$\frac{50.53 \text{ hours}}{1840.00 \text{ hours}} = 2.7\%$$

Therefore, an average CF-1, CF-2, or CF-3 team member spends 2.7 percent of his potentially productive time training in Home Station training requirements.

If 50.53 hours per year of Home Station training plus the training conducted at Field 4, Eglin AFB, adequately prepares personnel to accomplish their wartime tasks, than the statement by Air Force leaders that readiness is civil engineering's highest priority (37:3,4; 51:26; 52:6) would appear to be true. However, the most recent two published reports on civil engineering Prime BEEF training and readiness (28; 37),



which are discussed in chapter II, presented evidence that civil engineering personnel are not adequately prepared to accomplish their wartime tasks.

The first report, a 1980 AFIT thesis, was based solely on the opinions of civil engineering personnel. This report discovered that both CONUS and nonCONUS civil engineers believed the wartime training was not adequately preparing personnel for wartime task accomplishment (37:96) and that the readiness mission was not the highest priority of CONUS civil engineering organizations (37:95). Statements contained in chapters I, II, and IV of this thesis illustrate that at least some civil engineers still believe that current wartime training is not adequately preparing civil engineering personnel to accomplish their wartime tasks, and that the peacetime maintenance mission receives a higher priority than the readiness mission. Whether the majority of civil engineering personnel share these opinions is unknown.

The second report, a 1982 Inspector General report, was issued after a year's study of civil engineering contingency readiness. This report stated that:

the Prime BEEF Home Station training program was not fully preparing Prime BEEF units for their wartime role due to varying quality and lack of realism [28:16]."

The report also stated that some bases had aggressive training programs with extensive field exercises while other bases conducted training in the Home Station requirements only once a year. This research supports the statement that training varies from base to base as the maximum annual time spent in Home Station training was 215.00 hours while the minimum time was 13.34 hours.

No evaluation of Prime BEEF training or civil engineering readiness was published for the time period covered by this research, June 1983 to May 1984. Therefore, no conclusion will be drawn on whether 50.53 hours per year of Home Station training adequately prepares civil engineering personnel to accomplish their wartime tasks and whether, in practice, the readiness mission receives a higher priority than the peacetime maintenance mission.

#### Research Question 1a

Annually, how much time does an individual at base level (CONUS) spend training in the Home Station training requirement of Rapid Runway Repair?

A CF-1, CF-2, or CF-3 team member trains 8.63 hours per year in Home Station rapid runway repair training. Rapid runway repair training varies from a maximum of 53.00 hours per year to only one hour per year. Table 5-2 contains the annual RRR training times.

Table 5-2  
Annual RRR Training Times

Command	N	Training Times (hours)		
		Mean	Maximum	Minimum
Combined CONUS	72	8.63	53.00	1.00

None of the literature reviewed on Home Station training recommended training times or proficiency levels for CF-1, CF-2, or CF-3 teams. However, AFP 93-7 contains a lesson plan with the following measurable "Samples of Behavior":

Each student should be able to:

- a. State reasons for rapid runway repair.
- b. Identify parts of a rapid runway repair kit.
- c. Identify support equipment needed to repair a damaged runway.
- d. Describe criterion developed for successful implementation of rapid runway repair operations.
- e. Explain the method and procedures necessary to expedite repair of bomb damaged runways [27:7].

The lesson plan also stated that personnel should know how to perform as a member of a RRR team.

#### Research Question 1b

Annually, how much time does an individual at base level (CONUS) spend training in the Home Station training requirement of Weapons?

A CF-1, CF-2, or CF-3 team member trains 7.95 hours per year in the Home Station training requirement of weapons. AFR 50-36, "Combat Arms Training and Maintenance Program Management," has established a weapons training requirement for recurring training of six hours (16:6).

According to AFR 16:

The goal of this training is to instill, develop, and maintain in the trainee the confidence and ability to successfully engage, either as an individual or a member of a unit, enemy targets within the range and capabilities of the M16 rifle [16:21].

The 1983 Prime BEEF curriculum workshop report\* (4:a2) recommended only four hours of annual training and a proficiency standard of "3C" which means an individual:

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\* The 1983 Prime BEEF Curriculum Workshop Report only made recommendations based on participants knowledge and the recommendations have not been incorporated into Air Force regulations.

1. Can do all parts of the task
2. Needs only a spot check of completed work
3. Meets minimum local demands for speed and accuracy. (COMPETENT)
4. Can analyze facts and principles and draw conclusions about the subject. (ANALYSIS) [18:3-4].

The actual weapon training time of 7.95 exceeds AFR 50-36's requirement by almost two hours and is almost double the workshop's recommended training time. With a maximum training time of 45.00 hours and a minimum training time of 1.00 hours, it appears that a wide range of weapons training occurs. Table 5-3 contains the weapons training times.

Table 5-3  
Annual Weapons Training Times

Command	N	Training Times (hours)		
		Mean	Maximum	Minimum
Combined CONUS	72	7.85	45.00	1.00

#### Research Question 1c

Annually, how much time does an individual at base level (CONUS) spend training in the Home Station training requirement of Military Sanitation?

Members of CF-1, CF-2, or CF-3 teams spend 3.66 hours per year training in military sanitation. The maximum military sanitation training time was 16.00 hours per year while the minimum training time was 0.00 hours per year. Again, a wide range of training times exist. Military sanitation training is an annual requirement (12:15) and with a minimum reported training time of 0.00 hours some bases are violating AFR 93-3. Table 5-4 shows the annual military sanitation training times.

Table 5-4

## Annual Military Sanitation Training Times

Command	N	Training Times (hours)		
		Mean	Maximum	Minimum
Combined CONUS	73	3.66	16.00	0.00

AFR 93-3, AFR 93-7, and AFR 50-20 do not specify training times for military sanitation. The Prime BEEF curriculum workshop recommended two to three hours per year of training with a proficiency standard of "2C" which means an individual (4:a1):

1. Can do most parts of the task
2. Needs help only on hardest parts
3. May not meet local demands for speed or accuracy  
(Partially Proficient)
4. Can analyze facts and principles and draw conclusions  
about the subject. (ANALYSIS) [18:3-4].

Research Question 1d

Annually, how much time does an individual at base level (CONUS) spend training in the Home Station training requirement of Government Vehicle Operations?

Government vehicle operation training was separated into two categories for examination. The first category was Prime BEEF vehicle training for equipment operators and the second category was Prime BEEF vehicle training for nonequipment operators. The subdivision was made because equipment operators have different training requirements than personnel who are not equipment operators. Government vehicle operation training is not an annual requirement; however, personnel are required to have a government driver's license (12:15,16) and AFP 93-7 contains a list of vehicles which each AFSC should be able to operate (figure 2-1).

Equipment operators assigned to a CF-1, CF-2, or CF-3 team spend 8.49 hours per year on Prime BEEF vehicle training. The maximum vehicle training time for equipment operators is 96.00 hours, while the minimum time is 0.00 hours. Table 5-5 shows the Prime BEEF vehicle training times for equipment operators.

Table 5-5

Annual Military Vehicle Training Times for Equipment Operators

Command	N	Training Times (hours)		
		Mean	Maximum	Minimum
Combined CONUS	67	8.49	96.00	0.00

Air Force regulations do not contain a training time for Prime BEEF vehicle operation training. However, the 1983 Prime BEEF workshop recommended a training time of 8.00 hours for equipment operators and a proficiency standard of "2C" which means an individual (4:a1)

1. Can do most parts of the task
2. Needs help only on hardest parts
3. May not meet local demands for speed or accuracy  
(Partially Proficient)
4. Can analyze facts and principles and draw conclusions about the subject. (ANALYSIS) [18:3-4].

Members of CF-1, CF-2, or CF-3 teams who are not equipment operators train 2.72 hours per year in Prime BEEF vehicle operation. The maximum training time for vehicle operation training was 16.00 hours per year, while the minimum training time was 0.00 hours. As with equipment operators, Air Force regulations do not contain a Prime BEEF vehicle training time which must be met. The Prime BEEF curriculum

workshop recommended a training time of one hour and the same proficiency standard as for equipment operators, "2C". Table 5-6 lists the annual vehicle training times for nonequipment operators.

Table 5-6

Annual Military Vehicle Training Times for Nonequipment Operators

Command	N	Training Times (hours)		
		Mean	Maximum	Minimum
Combined CONUS	62	2.72	16.00	0.00

Research Question 1e

Annually, how much time does an individual at base level (CONUS) spend training in the Home Station training requirement of Expedient Repair Methods?

A CF-1, CF-2, or CF-3 team member trains 5.71 hours per year in the Home Station requirement of expedient repair. The maximum training time is 30.00 hours per year and the minimum training is 0.00 hours per year. Expedient repair training is an annual requirement (12:16) which some bases are not meeting with a minimum training time of 0.00 hours per year. Also, the 30.00 hour range of training time appears to support the 1982 IG report which found that training varied widely from base to base (28:16). Table 5-7 contains the annual expedient repair training times.

Air Force regulations do not contain an expedient repair training time which must be met. The Prime BEEF curriculum workshop recommended a total of three hours per year and a proficiency standard of "B" which means an individual "can (the) explain relationship of basic facts and

Table 5-7

## Annual Expedient Repair Training Times

Command	N	Training Times (hours)		
		Mean	Maximum	Minimum
Combined CONUS	73	5.71	30.00	0.00

state general principles about the subjects (18:3-4). Also, AFP 93-7 contains a lesson plan which lists the following measurable samples of behavior:

Each student should be able to:

- Describe different types of landing mats used for expedient runways.
- Describe different techniques of developing underground water.
- Name different methods of constructing expedient revetments.
- Select several types of materials that can be used as pavement patching materials.
- State which utilities would have the highest repair priority.
- Identify emergency function of certain base facilities during times of hostilities [27:78].

Research Question 1f

Annually, how much time does an individual at base level (CONUS) spend training in the Home Station training requirement of Explosive Ordnance Reconnaissance?

Members of CF-1, CF-2, or CF-3 teams train 2.81 hours per year in explosive ordnance reconnaissance. The maximum training time for team members is 16.00 hours per year while the minimum reported training time per year was 0.40 hours. Table 5-8 shows the annual explosive ordnance reconnaissance training times.



Table 5-8

Annual Explosive Ordnance Reconnaissance Training Times

Command	N	Training Times (hours)		
		Mean	Maximum	Minimum
Combined CONUS	73	2.81	16.00	0.40

Air Force regulations do not contain a required training time; however, AFR 93-3 states the following, which can be interpreted as a proficiency standard:

Therefore, Prime BEEF personnel must be able to recognize and describe unexploded ordnance, estimated distances to predetermined coordinates and report it to the explosive ordnance disposal (EOD) team [12:16].

Also, AFP 93-7 states in a lesson plan that personnel should be able to:

- a. List explosive identification features.
- b. Describe the verification procedures for buried unexploded ordnance.
- c. State precautions which must be used at an unexploded site.
- d. Describe procedures for reporting unexploded ordnance.
- e. Describe procedures for protective measures and works associated with UXOs [27:85].

The Prime BEEF curriculum workshop curriculum recommended a training time of one hour per year and a proficiency standard of "B" (4:a1) which means an individual "can explain (the) relationship of basic facts and state general principles about the subject" (18:3-4).

Research Question 1g

Annually, how much time does an individual at base level (CONUS) spend training in the Home Station training requirement of Chemical Warfare?

A CF-1, CF-2, or CF-3 team member trains 9.12 hours annually in the Home Station requirement of Chemical warfare. The maximum training time

was 26.00 hour per year and the minimum training time was 2.00 hours per year. Table 5-9 contains the chemical warfare training times.

Table 5-9  
Annual Chemical Warfare Training Times

Command	N	Training Times (hours)		
		Mean	Maximum	Minimum
Combined CONUS	71	9.12	26.00	2.00

AFR 93-3 states:

CW training should include learning to recognize the symptoms of chemical agents; donning, wearing and removing of personal protective equipment; performing normal duty tasks in CW protective equipment and clothing; knowing the limitations of protective gear; and familiarity with decontamination procedures [12:16]

To accomplish the above tasks, AFR 93-3 refers to training conducted in accordance with AFR 355-1, "Disaster Preparedness, Planning and Operations". AFR 355-1 establishes refresher training times and standards. The refresher training consists of two hours of classroom training and must be conducted annually (25:54). Also, AFR 355-1 requires civil engineers to perform Task Qualification Training (TQT) annually. During TQT personnel wear their protective clothing while performing their wartime tasks. Training times for TQT are not stated in AFR 93-3 or in AFR 355-1.

Finally, the Prime BEEF work shop recommended four hours of training for individual protective measures and sixteen hours of training in collective measures for a total of twenty hours of training annually. The workshop also recommended a proficiency standard of "3C" (41a1) which means an individual:

1. Can do all parts of the task
2. Needs only a spot check of completed work
3. Meets minimum local demands for speed and accuracy. (COMPETENT)
4. Can analyze facts and principles and draw conclusions about the subject. (ANALYSIS) [18:3-4].

#### Research Question 1h

Annually, how much time does an individual at base level (CONUS) spend training in the Home Station training requirement of personal, work party, and convoy security training?

A CF-1, CF-2, or CF-3 team member trains 8.67 hours annually in personal, work party, and convoy security training. The maximum training time is 61.00 hours per year and the minimum training time is 0.00. The 61.00 hour range of training time supports the 1982 IG report finding that training varies widely from base to base. Also, since the minimum training time is 0.00 hours and security training is an annual requirement (12:16), some bases are not complying with Air Force policy. Table 5-10 lists the security training times.

Table 5-10

#### Annual Personal, Work Party, and Convoy Security Training Times

Command	N	Training Times (hours)		
		Mean	Maximum	Minimum
Combined CONUS	72	8.67	61.00	0.00

Air Force regulations and pamphlets do not establish a minimum training time or proficiency standard. However, the Prime BEEF curriculum workshop recommended a total training time of five hours per year and a proficiency standard of "3C" which means an individual (4:a2):

1. Can do all parts of the task
2. Needs only a spot check of completed work
3. Meets minimum local demands for speed and accuracy. (COMPETENT)
4. Can analyze facts and principles and draw conclusions about the subject. (ANALYSIS) [18:3-4].

Subsequent to the Prime BEEF workshop a draft report on security training was issued by the Air Force Engineering and Service Center.

The draft "Concept of Operations for Prime BEEF Team Operations within the Air Base Ground Defense Area of Operations" dated 14 March 1984 recommended specific training requirements be incorporated into AFR 93-3(1:18). Briefly, the training requirements were knowledge of air base ground defense, perimeter layout, weapons and pyrotechnics familiarization, personal protection, unarmed defense, fire team tactics, convoy procedures, and communication procedures. A more detailed explanation of the training requirements is contained in chapter II.

#### Research Question 1i

Annually, how much time does an individual at base level (CONUS) spend training in the Home Station training requirement of War Reserve Material field equipment?

A member of a CF-1, CF-2, or CF-3 team trains 3.42 hours per year in war reserve material (WRM) field equipment. The maximum training time was 55.00 hours per year while the minimum training time was 0.00 hours per year. WRM field equipment training is an annual requirement (12:16) which some bases are not meeting. Also, the 55.00 hour range of training further illustrates the varying training times among bases. Table 5-11 lists the WRM field equipment training times.

Table 5-11

## Annual War Reserve Material Field Equipment Training Times

Command	N	Training Times (hours)		
		Mean	Maximum	Minimum
Combined CONUS	65	3.42	55.00	0.00

Air Force regulations and pamphlets did not establish a minimum training time; however, the Prime BEEF curriculum workshop recommended one hour of training per year on the beddown of WRM field equipment with a proficiency standard of "B" (4:a1) which means an individual "can explain (the) relationship of basic facts and state general principles about the subject" (18:3-4).

Research Question 1j

Annually, how much time does an individual at base level (CONUS) spend in the field on the annual bivouac?

A CF-1, CF-2, or CF-3 team member annually spends 4.03 days in the field during the annual bivouac. The maximum time spent in the field was 18 days and the minimum was 0.00 days. An annual bivouac is a requirement of Home Station training and with a minimum time of 0.00 hours, some bases are not complying with the regulation. Table 5-12 shows the days spent in the field on bivouac.

Table 5-12

## Days Spent on Annual Bivouac

Command	N	Days Spent on Bivouac		
		Mean	Maximum	Minimum
Combined CONUS	72	4.03	18.00	0.00

### Research Question 2

What method of instruction is used to teach/conduct the Home Station training program (CONUS)?

Table 5-13 shows how the annual Home Station training time for a CF-1, CF-2, or CF-3 team member is divided between different methods of instruction. Hands-on training accounts for almost 63.6 percent of all training time, followed by lecture/demonstration with about 27.8 percent. Finally, film accounts for about 8.4 percent and Other accounts for the remaining 0.2 percent.

Table 5-13

#### Methods of Instruction for Home Station Training Program

(Combined CONUS) Method of Instruction	N	Training Times (hours)		
		Mean	Maximum	Minimum
Lecture/Demonstration	74	13.78	32.00	0.00
Film	74	4.16	20.00	0.00
Hands-On	74	31.46	193.00	3.00
Other	74	0.11	2.00	0.00

The 1982 IG report stated that "hands-on training should be emphasized as they found some bases teaching their Prime BEEF training almost entirely in the classroom (28:16,17). AFM 50-62 recognizes the importance of hands-on training as it "is based on the generally accepted principle that students learn best by doing" (18:17-1). This research concludes that overall hands-on training is being emphasized over other methods of training.

### Research Question 2a

What method of instruction is used to teach/conduct the Home Station training requirement of Rapid Runway Repair (CONUS)?

Rapid runway repair training for a CF-1, CF-2, or CF-3 team member is accomplished by the methods of instruction as shown in table 5-14. As with the overall Home Station training program, hands-on training accounts for the majority of the training. Specifically, the hands-on method of instruction accounts for 67.8 percent of all RRR training time, lecture and/or demonstration method accounts for 18.7 percent, and film accounts for 13.1 percent. Other methods of instruction account for the remaining 0.4 percent of the total RRR training time.

Table 5-14

#### Methods of Instruction - RRR Training

(Combined CONUS) Method of Instruction	N	Training Times (hours)		
		Mean	Maximum	Minimum
Lecture/Demonstration	72	1.57	8.00	0.00
Film	72	1.13	5.00	0.00
Hands-On	72	5.86	48.00	0.00
Other	72	0.08	2.00	0.00

### Research Question 2b

What method of instruction is used to teach/conduct the Home Station training requirement of Weapons (CONUS)?

Table 5-15 shows how the annual weapons training for a CF-1, CF-2, or CF-3 team member is divided between different methods of instruction. Hands-on training accounts for almost 68 percent of the training. Film training is very small with only 0.12 hours being accomplished.

Table 5-15

Methods of Instruction - Weapons Training

(Combined CONUS) Method of Instruction	N	Training Times (hours)		
		Mean	Maximum	Minimum
Lecture/Demonstration	72	2.38	6.00	0.00
Film	70	0.12	1.00	0.00
Hands-On	72	5.26	40.00	0.00
Other	72	0.00	0.00	0.00

Research Question 2c

What method of instruction is used to teach/conduct the Home Station training requirement of Military Sanitation (CONUS)?

Military sanitation training in the different methods of instruction for a CF-1, CF-2, or CF-3 team member is shown in table 5-16. Lecture and demonstration training accounts for 45.1 percent of the total training while hands-on training accounts for about 32 percent of the time. Film was used about 15 percent of the time. An interesting point is that the minimum reported hands-on training time was 0.00 hours. This means that, at least for one base, the average CF-1, CF-2, or CF-3 team member does not handle the M16 rifle. However, AFR 93-3 requires Prime BEEF personnel to "annually demonstrate minimum marksmanship proficiency" (12:15).



Table 5-16

## Methods of Instruction - Military Sanitation Training

(Combined CONUS) Method of Instruction	N	Training Times (hours)		
		Mean	Maximum	Minimum
Lecture/Demonstration	74	1.48	5.00	0.00
Film	72	0.58	2.50	0.00
Hands-On	72	1.21	8.00	0.00
Other	73	0.01	0.12	1.00

Research Question 2d

What method of instruction is used to teach/conduct the Home Station training requirement of Military Vehicle Operations?

Tables 5-17 and 5-18 show how the vehicle operations training times for equipment and nonequipment members of CF-1, CF-2, or CF-3 teams are divided between the different methods of instruction. Hands-on training, which accounts for 87.3 percent of the training for equipment operators and 64 percent of the training for non-equipment operators, is the primary method of instruction used.

Table 5-17

## Methods of Instruction - Equipment Operators Vehicle Training

(Combined CONUS) Method of Instruction	N	Training Times (hours)		
		Mean	Maximum	Minimum
Lecture/Demonstration	67	0.68	8.00	0.00
Film	67	0.35	6.00	0.00
Hands-On	67	7.20	96.00	0.00
Other	67	0.02	1.00	0.00

Table 5-18

## Methods of Instruction - Nonequipment Operators Vehicle Training

(Combined CONUS) Method of Instruction	N	Training Times (hours)		
		Mean	Maximum	Minimum
Lecture/Demonstration	62	0.74	8.00	0.00
Film	62	0.20	3.00	0.00
Hands-On	62	1.67	14.00	0.00
Other	62	0.00	0.00	0.00

Research Question 2e

What method of instruction is used to teach/conduct the Home Station training requirement of Expedient Repair (CONUS)?

Table 5-19 shows the amount of time a CF-1, CF-2, or CF-3 team member spends training in the different methods of instruction for expedient repairs. Hands-on training accounts for over 71 percent of the training time, followed by lectures with 22.6 percent of the training time and film with 5.8 percent of the training time. The other category accounts for the remaining time.

Table 5-19

## Methods of Instruction - Expedient Repair Training

(Combined CONUS) Method of Instruction	N	Training Times (hours)		
		Mean	Maximum	Minimum
Lecture/Demonstration	74	1.28	4.00	0.00
Film	73	0.33	2.50	0.00
Hands-On	73	4.05	27.00	0.00
Other	73	0.00	0.00	0.00

### Research Question 2f

What method of instruction is used to teach/conduct the Home Station training requirement of Explosive Ordnance Reconnaissance (CONUS)?

Table 5-20 shows how explosive ordnance reconnaissance (EOR) training time for a CF-1, CF-2, or CF-3 team member is divided between the different methods of instruction. A team member trains 40.5 percent of the time with hands-on methods of instruction, 39.5 percent of the time with lectures/demonstrations and 20.0 percent of the time with films.

Table 5-20

#### Methods of Instruction - Explosive Ordnance Reconnaissance Training

(Combined CONUS) Method of Instruction	N	Training Times (hours)		
		Mean	Maximum	Minimum
Lecture/Demonstration	74	1.04	4.00	0.00
Film	71	0.53	2.50	0.00
Hands-On	73	1.07	12.00	0.00
Other	72	0.00	0.00	0.00

### Research Question 2g

What method of instruction is used to teach/conduct the Home Station training requirement of Chemical Warfare (CONUS)?

Table 5-21 shows how the different methods of instruction are used to teach a CF-1, CF-2, or CF-3 team member. Hands-on training is accomplished 54.5 percent of the time; lecture and/or demonstration 37.2 percent of the time; film 8.1 percent of the time and other 0.2 percent

of the time. Again, more hands-on training is accomplished than any other method of training, however, the minimum reported hands-on training time is 0.00 hours. This implies that at least one base is not performing task qualification training, which requires the wearing of chemical protective equipment while performing wartime tasks (25:54).

Table 5-21

Methods of Instruction - Chemical Warfare Training

(Combined CONUS) Method of Instruction	N	Training Times (hours)		
		Mean	Maximum	Minimum
Lecture/Demonstration	73	3.36	8.00	0.00
Film	73	0.73	3.00	0.00
Hands-On	71	4.93	20.00	0.00
Other	72	0.02	1.00	0.00

Research Question 2h

What method of instruction is used to teach/conduct the Home Station training requirement of Personal, Work Party, and Convoy Security (CONUS)?

The primary method of instruction used in teaching personal, work party, and convoy security to a CF-1, CF-2, or CF-3 team member is hands-on. Hands-on training accounts for 72.7 percent of the security training conducted. Lecture and/or demonstration accounts for 22.0 percent of the security training. The remaining training time is accomplished using film (5.2%) and other methods of instruction (0.1%). Table 5-22 shows how the annual personal, work party, and convoy

security training time is divided between the different methods of instruction.

Table 5-22

Method of Instruction—Personal, Work Party, and Convoy Security Training

(Combined CONUS) Method of Instruction	N	Training Times (hours)		
		Mean	Maximum	Minimum
Lecture/Demonstration	72	1.86	6.00	0.00
Film	72	0.44	3.00	0.00
Hands-On	72	6.15	56.00	0.00
Other	73	0.01	1.00	0.00

Research Question 2i

What method of instruction is used to teach/conduct the Home Station training requirement of War Reserve Material (WRM) Field Equipment (CONUS)?

Hands-on training is used more than any other method of instruction to teach a CF-1, CF-2, or CF-3 team member about WRM field equipment. Hands-on training is used 78.2 percent of the time; lecture and demonstration 13.4 percent of the time; and film the remaining 8.4 percent of the time. The finding that hands-on training accounts for the majority of WRM training conflicts with AFR 93-7 which states "this training is conducted by the use of briefings, sound-on-slide presentations and 16mm films" (27:18). Table 5-23 shows how the annual WRM field equipment training times are divided between the different methods of instruction.

Table 5-23

## Methods of Instruction - WRM Field Equipment Training

(Combined CONUS)		Training Times (hours)		
Method of Instruction	N	Mean	Maximum	Minimum
Lecture/Demonstration	65	0.45	3.00	0.00
Film	65	0.28	2.50	0.00
Hands-On	65	2.62	53.00	0.00
Other	65	0.00	0.00	0.00

Research Question 3

Are the annual bivouacs (CONUS) conducted on or off the base and which organizations participate in and/or support the bivouac?

Almost two-thirds of all CONUS bases conduct their annual bivouac on base: 23 percent of the bases conduct their bivouac off base and 12.2 percent of the bases conduct their annual bivouac on and off base.

Captain Jeff Thomas, the Contingency Engineering Course instructor at the Air Force Institute of Technology's School of Civil Engineering, observed that when bivouacs are held on base, personnel "on bivouac" are more likely to be recalled to the civil engineering unit to respond to a peacetime maintenance problem than are personnel who are bivouacing several miles away from the base. Captain Thomas also observed that an annual bivouac held off base, because of the change of location from the day-to-day job, may result in personnel taking the training more seriously than if the bivouac was held on base (53). Table 5-24 shows how many bases hold their annual bivouac on, off, or on and off base.

Table 5-24

## Location of Annual Field Bivouac

(Combined CONUS) Bivouac	Bases	
	Number	Percent
On Base	47	63.5
Off Base	17	23.0
On and Off Base	9	12.2
(Missing Data)	<u>1</u>	1.4
Total	74	

Table 5-25 shows which organizations participate in and support the annual bivouac. The organizations can be divided into three major groups: on-base organizations, sister services both active and reserve, and others.

The four on-base organizations which participated the most in CONUS bases' annual bivouacs were the security police, food services, hospital, and disaster preparedness. Participation by active and reserve sister services in the annual bivouac was much less than on-base organizations. The four sister service organizations which participated the most were the Army National Guard, the Army, the Air National Guard, and the Air Force Reserve. Only five organizations not listed on the questionnaire participated in the annual bivouac and they are listed in table 5-25.

More on-base organizations supported the annual bivouac than participated in it. Transportation supported 71.6%, food services supported 64.9%, and the hospital supported 55.4% of the 74 CONUS bases

Table 5-25

## Organizations Which Participate In or Support Bivouac - CONUS

(N = 74 bases) Organization	Participate		Support	
	Number	Percent	Number	Percent
Security Police	48	64.9	32	43.2
Hospital/Medical Center	25	33.8	41	55.4
Disaster Preparedness	23	31.1	33	44.6
Transportation	7	9.5	53	71.6
Supply	4	5.4	35	47.3
Food Services	38	51.4	48	64.9
Explosive Ordnance Det.	18	24.3	25	33.8
Air Force Reserve	3	4.1	13	17.6
Air National Guard	4	5.4	17	23.0
Army	5	6.8	17	23.0
Army Reserve	2	2.7	17	23.0
Army National Guard	6	8.1	24	24.4
Navy	1	1.4	2	2.7
Navy Reserves	0	0.0	2	2.7
Marines	1	1.4	1	1.4
Marine Reserves	2	2.7	3	4.1
Others	5	6.8	10	13.5
Others who participate	Others who support*			
Combat Commo. Group	Tactical Control Flights			
U.S. Customs Service	Other Bases			
WARSKILL personnel	Local Civil Defense			
Small Arms Training Det.	USAF Academy CWIT			
(reported twice)	National Park Service			
	Local Police			
	Parks Department			
	Girl Scouts			
	Cadet Wing			
	Combat Commo. Group			
	FEMA			

which responded to the questionnaire. The remaining four on-base organizations listed on the questionnaire (security police, disaster preparedness, supply, and explosive ordnance detachment) supported less

\* Some bases reported more than one "other" organization which supported their bivouac.



than 50% of the CONUS bases annual bivouacs. The four sister services which supported the most annual bivouacs were the Army National Guard, the Army, the Army Reserve, and the Air National Guard. Other organizations which supported the annual bivouacs are listed in table 5-25.

#### Research Question 4

What are the differences in Home Station training between CONUS Air Force Commands?

Table 5-26 shows the summation annual training times for a CF-1, CF-2, or CF-3 team member, who is not an equipment operator, for each CONUS command and for the Combined CONUS commands. The summation training time consists of the training times reported for the following Home Station training requirements:

1. Rapid runway repair
2. Weapons
3. Military sanitation
4. Government vehicle operation
5. Expedient repair methods
6. Explosive ordnance reconnaissance
7. Chemical warfare
8. Personal, work party, and convoy security
9. War reserve material field equipment

Of all the CONUS commands, the Air Force Logistics Command's (AFLC) CF-1, CF-2, and CF-3 personnel spend more time training, 187.00 hours per year, in the Home Station training program than any other command. AFLC does 3 times as much training Tactical Air Command (TAC) which has the second highest training time, 55.20 hours per year, of the CONUS commands. Interestingly, a TAC base also had the lowest reported annual training time, 13.34 hours per year, for CF-1, CF-2, and CF-3 team personnel. The average training time for the 74 CONUS bases which responded to the questionnaire was 50.53 hours per year. Air Force

Table 5-26

## Summation of Annual Training Times For CONUS Commands

Command	N	Training Times (hours)		
		Mean	Maximum	Minimum
AFLC	5	187.00	393.00	40.00
TAC	17	55.20	122.00	13.34
ATC	10	53.05	134.00	19.25
OTHER	3	50.83	55.00	48.50
Combined CONUS	74	50.53	215.00	13.34
SAC	23	49.63	89.00	18.50
MAC	13	30.30	52.00	15.00
AFSC	3	28.33	37.00	21.00
AFLC return rate = 100.0% AFSC return rate = 75.0% ATC return rate = 90.9% MAC return rate = 92.9% SAC return rate = 95.8% TAC return rate = 100.0% OTHER return rate = 100.0% CONUS return rate = 94.9%				

Systems Command (AFSC) had the lowest annual training time, 28.33 hours per year, and Military Airlift Command (MAC) had the second lowest training time accomplishing 30.30 hours per year.

1. The tables presented in chapter 5 may appear to contain discrepancies. For instance, in table 5-26 the maximum time for AFLC is 393.00 hours while the maximum CONUS time is only 215.00 hours. Since AFLC data was used to calculate the Combined CONUS times it is reasonable to expect the maximum Combined CONUS time to be 393.00 hours. The reason for this "discrepancy" is the exclusion of outlier values. The 393.00 hours was not an outlier value for AFLC and was therefore included in the calculation of AFLC's training time. However, the 393.00 hours was an outlier value for Combined CONUS and was excluded from the calculation of the Combined CONUS's training time. While exclusion of outlier values does not provide the appearance of discrepancy free tables, this practice does provide a truer representation of the training times (30:275-278). Chapter 3 contains a complete explanation of outliers and how, for this research, values were determined to be outliers.

On inspection of table 5-26 the commands can be separated into three groups. The group with the most training would include only AFLC. The middle tier group would be composed of TAC, ATC, OTHER (commands), and SAC. These middle tier commands' annual summation training times were remarkable similar, ranging from TAC's 55.20 hours per year down to SAC's 49.63 hours per year. AFSC and MAC have the lowest average summation training times with 28.33 hours per year and 30.33 hours per year respectively.

Table 5-27 shows the summation training times, in percentages, for each command separated into the different methods of instruction. The percentages were calculated by using the data contained in each command's summation training table contained in Chapter IV and Appendix L.

Table 5-27

Percentages of Summation Method of Instruction Times by Command

Command	Percentages of Training Times			
	Lecture/Demonst.	Film	Hands-on	Other
AFLC	14.0%	7.1%	71.3%	7.6%
AFSC	36.2%	20.9%	39.4%	3.5%
ATC	31.6%	5.9%	61.6%	0.9%
MAC	35.9%	9.7%	54.4%	0.0%
Combined CONUS	27.8%	8.4%	63.5%	0.2%
SAC	29.4%	11.1%	59.5%	0.0%
TAC	27.7%	7.9%	64.4%	0.0%
OTHER	27.9%	13.1%	59.0%	0.0%

AFLC, the command which does the most Home Station training does more hands-on training and less training involving lectures and or demonstrations than any other CONUS command. AFLC also has the second lowest percentage of film usage of any command.

AFSC, the command which reported the least amount of Home Station training time does less hands-on training, percentage wise, than any other CONUS command. AFSC also has the highest percentage of film usage and lecture/demonstration than any of the CONUS commands. Specifically, AFSC uses films for training (20.9%) more than twice as much as the CONUS average (8.4%).

As with the table 5-26, the commands in table 5-27 can also be separated into three groups. As before, AFLC would be in the top group with the most hands-on training and least lecture/demonstration training of any CONUS command. The middle tier, consisting of TAC, SAC, ATC, and OTHER have remarkable similar training percentages for lecture/demonstration (from 27.4% to 31.9%) and for hands-on training percentages (from 59.0% to 64.0%). The lower tier group, composed of AFSC and MAC, have almost the same lecture/demonstration percentage (36.2% and 35.9%). However, MAC's film percentage is half of AFSC's film percentage (9.7% to 20.9%) and MAC does substantially more hands-on training than AFSC (54.9% to 39.4%).

#### Research Question 5

What are the differences in Home Station training between CONUS and nonCONUS commands?

Prior to discussing the differences in Home Station training between CONUS and nonCONUS commands, the data from USAFE needs to be reviewed. As stated in chapter III, questionnaires were sent to the eight USAFE bases identified in USAFE's draft supplement to AFR 93-3 as having Prime BEEF mobile teams. Six questionnaires were returned. Two of the six bases stated they did not have Prime BEEF mobile teams. Of

the remaining four questionnaires two reported minimal training (respectively, one hour and two hours of RRR training). The last two questionnaires reported larger amounts of training i.e. 96 hours of RRR training. Captain Tom Ryburn, a USAFE IG inspector from May 1980 to July 1982, reviewed USAFE's data and offered one explanation for the small amount of training time on two of the questionnaires (48). He theorized that whoever answered the questionnaires included only "formal" training and not the training received during exercises. The questionnaire contained instructions in bold letters requesting training conducted during exercises be included in the training times. However, the reader is advised that the USAFE training times may be understated.

All of the nonCONUS commands conduct more Home Station training than the average CONUS command. Of the three nonCONUS commands, AAC trains the most with 105.50 hours per year, followed by USAFE with 100.61 hours per year, and by PACAF with 79.33 hours per year. Table 5-28 contains the summation training times for the nonCONUS and Combined CONUS commands.

The percentage of time spent conducting training using lectures/demonstrations in the nonCONUS commands was 0.2 percent to 5.4 percent greater than the time spent by CONUS commands. Surprisingly, only USAFE had a greater percentage of hands-on training than the CONUS commands. USAFE's percentage of hands-on training was 65.5 percent while the CONUS commands' percentage was 63.5 -- a 2.0 percent difference. AAC and PACAF each had a hands-on training percentage of 55.9%. Only USAFE used films to teach Home Station training less than did the CONUS commands. AAC and PACAF conducted more Home Station training with films than did the CONUS commands. Table 5-29 shows the

Table 5-28\*

## Summation Training Times of NonCONUS Commands and Combined CONUS

Command	N	Total Training Times (hours)		
		Mean	Maximum	Minimum
AAC	2	105.50	181.00	30.00
USAFE	4	100.61	231.00	14.50
PACAF	3	79.33	101.00	63.00
Combined CONUS	74	50.53	215.00	13.34
AAC return rate = 100.0%				
USAFE return rate = 75.0%				
PACAF return rate = 100.0%				
CONUS return rate = 94.9%				

Table 5-29

## Percentages of Summation Method of Instruction Times by Command

Command	Percentages of Training Times			
	Lecture/Demonst.	Film	Hands-on	Other
AAC	28.0%	15.6%	55.9%	0.5%
PACAF	33.2%	10.9%	55.9%	0.0%
USAFE	29.7%	4.8%	65.5%	0.0%
Combined CONUS	27.8%	8.4%	63.5%	0.2%

percentage of training times by each method of instruction for the nonCONUS commands and the Combined CONUS.

Table 5-30 shows the annual total Rapid Runway Repair (RRR) training of a CF-1, CF-2, or CF-3 team member for AAC, PACAF, and Combined CONUS. The table also shows the RRR training time for a member of USAFE's mobile teams and for a member of USAFE's RRR teams. USAFE's

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- \*. The nonCONUS commands were not combined into one category, as were the CONUS commands because USAFE has a different Prime BEEF organization than the rest of the Air Force and a separate questionnaire was used to obtain data from USAFE.

Table 5-30

## Annual RRR Training Times For NonCONUS Commands and Combined CONUS

Command	N	Training Times (hours)		
		Mean	Maximum	Minimum
AAC	2	1.50	2.00	1.00
PACAF	3	7.67	14.00	1.00
USAFE	4	27.25	96.00	1.00
USAFE RRR Team	4	35.00	60.00	10.00
Combined CONUS	72	8.63	53.00	1.00

mobile team's training requirements are similar to those of a CF-1, CF-2, or CF-3 team. USAFE's RRR teams specialize in being prepared to repair battle damaged runways and were surveyed on the assumption that RRR teams would do more RRR Home Station training than any other civil engineering personnel. However, the reader should remember that the USAFE data may be understated and that these training times do not include training time which occurred at Field 4, Eglin AFB for the CONUS commands and at Ramstein AB, Germany for the USAFE teams.

Annually, USAFE's mobile and RRR team members do train more than a member of a CF-1, CF-2, or CF-3 team. With a training time of 35.00 hours a USAFE RRR team member had the highest RRR training time of any command surveyed. A USAFE mobile team member trains 27.25 hours per year which is almost as much as a member of USAFE's mobile team trains. Surprisingly, AAC and PACAF CF-1, CF-2, or CF-3 team members train less in RRR than the average CONUS CF-1, CF-2, or CF-3 team member. AAC had the lowest RRR training time, 1.50 hours per year, of any command surveyed.

Table 5-31 shows how the RRR training is divided between the different methods of instruction for the nonCONUS and Combined CONUS commands. AAC, the command which does the least amount of RRR training of any Air Force command, also does all of its RRR training using films. USAFE's mobile and RRR team members use more hands-on training than any other Air Force command surveyed. USAFE mobile team members spend 20.9 percent more of their RRR training time performing hands-on training than do their counterparts in the CONUS commands.

Table 5-31

Percentages of RRR Summation Method of Instruction Times by Command

Command	Percentages of Training Times			
	Lecture/Demonst.	Film	Hands-on	Other
AAC	0.0%	100.0%	0.0%	0.0%
PACAF	13.0%	17.3%	69.5%	0.0%
USAFE	12.8%	2.7%	84.4%	0.0%
USAFE RRR Team	8.9%	1.1%	82.9%	7.1%
Combined CONUS	27.8%	8.4%	63.5%	0.2%

#### Research Question 6

How much team equipment is missing at CONUS and nonCONUS bases from the following team equipment sets?

1. Contingency support set (CSS)
2. Home Station training set (HSTS)
3. CF-2 team kit
4. RRR mini-kit

Table 5-32 lists the percentage of Prime BEEF team equipment missing for nonCONUS commands and the percentage missing for the average CONUS command. For USAFE, values are not reported for Home Station training sets and RRR mini kits because USAFE does not have these equipment sets.



Table 5-32

## Percentages of Team Equipment Missing - NonCONUS and CONUS

Command	Percentages of Team Equipment Missing			
	CSS (N)	HSTS (N)	CF-2 (N)	RRR kit (N)
AAC	4.5% (2)	25.0% (1)	5.0% (2)	35.0% (2)
PACAF	70.0% (3)	100.0% (1)	38.0% (3)	35.0% (3)
USAFE	7.5% (4)		5.5% (4)	
Combined CONUS	23.4% (28)	15.8% (34)	1.9% (67)	11.2% (70)

PACAF is missing more equipment for each of the equipment sets than any of the other commands. PACAF's missing equipment percentages are large, ranging from a low of 35.0 percent for the RRR mini-kit to 100.0 percent for the Home Station training set.\* Also, PACAF and the AAC are missing 35 percent of their RRR mini-Kits.

Summary

This chapter has discussed and analyzed the data obtained from the two survey questionnaires and information contained in Air Force regulations, manuals, pamphlets, and reports. The next chapter will draw conclusions and make recommendations.

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\* One PACAF base (case 067 in the data) reported missing percentages for their team equipment ranging from 85.0% to 100.0%. The base may have misread the questions and reported equipment on-hand and not equipment missing.

## VI. Conclusions and Recommendations

### Overview

This chapter summarizes the conclusions that can be drawn from this study of Prime BEEF Home Station training. Recommendations for improvement of the Home Station training program are made, and recommendations for further research are suggested.

### Conclusions

1. The annual Home Station training times for a CF-1, CF-2, or CF-3 team member, within and between Air Force commands, vary significantly. The average total training time for a CF-1, CF-2, or CF-3 team member in AFLC was 187.00 hours per year while the average total training time for AFSC was 28.33 hours per year. Within AFLC the training times ranged from a maximum of 393.00 hours per year to a minimum of 40 hours per year. The lowest total training time reported was by a TAC base (13.34 hours per year). These widely varying training times indicates the need for measurable proficiency and evaluation standards.

2. A CONUS CF-1, CF-2, or CF-3 team member spends an average of 50.53 hours per year training in Home Station training requirements which equals 2.7 percent of an individual's potentially productive time during a year. Whether 50.53 hours per year of training adequately prepares civil engineering personnel to accomplish their wartime tasks is not known. However, with civil engineering personnel spending only 2.7 percent of their duty time training in the Home Station requirements, it is understandable why some civil engineering personnel

believe the peace-time maintenance mission is a higher priority than the readiness mission.

3. The 50.53 hours per year an average CF-1, CF-2, or CF-3 team member spends training is divided as follows among the Home Station training requirements.\*

9.12 hours	Chemical warfare
8.67 hours	Personal, work party, and convoy security
8.63 hours	Rapid runway repair
7.85 hours	Weapons
5.71 hours	Expedient repair methods
3.66 hours	Military Sanitation
3.42 hours	War reserve material field equipment
2.81 hours	Explosive ordnance reconnaissance
2.72 hours	Vehicle training for nonequipment operators
(8.49 hours)	**Vehicle training for equipment operators

4. Whether the times for the Home Station requirements, listed in conclusion 3, adequately prepares civil engineering personnel to accomplish their wartime tasks is unknown. However, the author has reservations about whether the specific training tasks or objectives for each Home Station training requirement, as stated in Air Force regulations, manuals, pamphlets, and reports, can be accomplished in the times listed in conclusion 3.

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\* The training times for the specific training requirements add up to 52.59 hours, not to 50.53 hours. The reason for the difference is that all the training times are calculated "means", and the formula for calculating the mean is dependent on the number of values used in the calculation. Specifically, the mean value of total training time, 50.53 hours per year, was a result of 74 values in the calculation; whereas the number of values used in calculating the specific training times varied as low as 65 values. The sum of the specific training times would only equal the calculated total mean if all of the specific training times had the same number of values as did the calculated mean. The reason for the different number of values for the specific training requirements is missing data and exclusion of outlier values.

\*\* The vehicle training time for equipment operators was not included in the total annual training time.

5. The primary method of instruction in all of the Home Station training requirements, except military sanitation, is hands-on. For the total annual training time, the hands-on method of instruction accounts for 63.6 percent of the training time. The second most used method of instruction is lecture and/or demonstration, accounting for 27.8 percent of the time. Film is used 8.4 percent of the time and other methods of instruction is used 0.2 percent of the time.

6. Some bases are not complying with Air Force regulations by not training in mandatory Home Station requirements. Specifically, 33 bases out of 74 CONUS bases reported 0.00 hours per year of War Reserve Material field equipment training.

7. An average CONUS CF-1, CF-2, or CF-3 team member spends 4.03 days on annual bivouac; and 63.5 percent of CONUS bases conduct their bivouac on the installation, 23.0 percent bivouac off the installation, and 12.2 percent bivouac on and off the installation.

8. Many organizations participate in and support the annual bivouacs. The on-base organizations which participated in the most bivouacs were the security police (64.9% of the bases), and transportation (51.4% of the bases). The remaining on-base organizations participated in the bivouacs for less than 50 percent of the bases. Less than 10 percent of the bases had sister service organizations participating in the bivouacs. More organizations supported the annual bivouacs than participated in them. The organizations which supported the most annual bivouacs were transportation (71.6% of the bases), food services (64.9% of the bases), and the security police (55.4% of the bases). The rest of the on-base organizations supported the annual bivouacs for less than 50 percent of

the bases. More sister service organizations supported annual bivouacs than participated in them; however, none of the organizations supported more than 25 percent of the bases. The Army National Guard (24.4% of the bases), the Army (23.0% of the bases), the Army Reserve (23.0%), and the Air National Guard (23.0% of the bases) were the top four sister service supporters of civil engineering annual bivouacs.

9. AFLC's CF-1, CF-2, or CF-3 team members do the most Home Station training of the CONUS commands (187.00 hours per year). AFSC and MAC's CF-1, CF-2, or CF-3 team members train the least in the Home Station training requirements (AFSC 28.33 hours per year, MAC 30.30 hours per year). The rest of the CONUS command's annual training times were close to the average training time of 50.53 hours per year. One interesting fact is that TAC, which had the second highest total annual training time (55.20 hours per year), had the lowest total annual training time for any base (13.34 hours per year).

10. AFLC, the command which does the most training, does more hands-on training and less training with lectures and/or demonstrations than any other CONUS command. AFLC also had the lowest film usage.

11. AFSC, the command which does the least amount of training, does less hands-on training than any other CONUS command and has the highest percentage of film usage than any other CONUS command.

12. All of the nonCONUS commands, AAC, PACAF, and USAFE, spend about twice as many hours training than the average CONUS command. However, only USAFE performed a greater percentage of hands-on training than the average CONUS command.

13. USAFE mobile team members train 3 times as many hours in rapid runway repair as CONUS CF-1, CF-2, or CF-3 team members. USAFE RRR team

members train about 4 times as many hours in rapid runway repair as CONUS CF-1, CF-2, or CF-3 team members. USAFE mobile and RRR team members spend a greater percentage of their training time in hands-on training than a CONUS CF-1, CF-2, or CF-3 team member.

14. Alaskan Air Command CF-1, CF-2, or CF-3 team members do not do any hands-on RRR training.

15. The amount of team equipment missing for CONUS commands varies from 23.4 percent for contingency support sets to 1.9 percent for CF-2 kits.

16. The Air Force regulations, manuals, and pamphlets do not, except for weapons, chemical, and government vehicle training, state minimum training times or proficiency standards which must be met by CF-1, CF-2, or CF-3 team members.

17. Only five of the Home Station training requirements are listed in the Ancillary Training Program. Those five requirements are:

1. Weapons (M16 rifle)
2. Explosive Ordnance Reconnaissance Orientation
3. Self-Aid and Buddy Care
4. Chemical Warfare
5. Government Vehicle Operators Classroom Training

The remaining Home Station training requirements are not referenced in AFRs 36-1 and 39-1, which specify the duties of officer and airman Air Force Specialty Codes (AFSC). AFR 50-1, "Ancillary Training Program," requires training, not identified in AFRs 36-1 and 39-1, to be listed as an ancillary training program. The ancillary training program also requires the Instructional System Development to be applied to all ancillary training.

18. Air Force regulations require the use of the Instructional System Development (ISD) for all training development and modification. ISD was not used when the Home Station training requirements were first developed in 1977 and 1978. ISD was first applied to the Home Station training requirements during a Prime BEEF curriculum workshop held at the Air Force Engineering and Services Center in September 1983. ISD requires the development of specific objectives and tests for each objective to ensure that the training is effective. This has not been accomplished for the Home Station training requirements.

#### Recommendations

The following recommendations are offered for consideration in future efforts to improve the Prime BEEF Home Station training program.

1. Develop and implement proficiency standards and evaluation standards for all Home Station training requirements in accordance with the Instructional System Development. The proficiency evaluation standards should be developed for both individuals and teams. Also, all new proficiency standards should be coordinated with other impacted organizations to avoid conflicts (different standards or training times) between Air Force regulations. For example, a proposed weapons proficiency standard should be coordinated with HQ AFOSP/SPOT, the organization which is responsible for AFR 50-36, "Combat Arms Training and Maintenance Program Management".

2. Add the Home Station training requirements to the ancillary training program.

3. Ensure that all bases accomplish all annual Home Station training requirements.

4. Reemphasize that the readiness mission is a higher priority mission than the peacetime mission to all civil engineering personnel, and to the senior leadership of the Air Force. This reemphasis must be by action as well as by verbal statements.

5. Conduct further research to:

a. Determine if an average training time of 50.53 hours per year of training adequately prepares a CF-1, CF-2, or CF-3 team member to accomplish their wartime tasks.

b. Determine if the training time currently occurring in each of the Home Station training requirements is adequately preparing a CF-1, CF-2, or CF-3 team member to adequately accomplish their wartime tasks.

c. Determine why the training times vary so widely among bases.

d. Compare the Air Force civil engineering wartime training program to the civil engineering training programs of the Army, Navy, and Marines. The author considered incorporating this information into this thesis, but this comparison would be a thesis in itself. Points of contact, with telephone numbers, for the sister service engineer organizations are contained in Appendix M. Anyone attempting to do this research should visit the Engineer School at Fort Belvoir, Virginia, the Navy SEABEE base at Gulfport, Mississippi, the Air Force Engineering and Services Center, Florida, and the Marine Corp Staff at the Pentagon.



# Appendix A: Field 4 Training Schedule

## SCHEDULE OF EVENTS

DAY 1 (Theater)			DAY 2 (C/R "A")			DAY 3 (Theater)		DAY 4 (Theater)		DAY 5	
BREAKFAST			BREAKFAST	REVERSE OSMOSIS TRAINING		BREAKFAST	RAPID RUNWAY REPAIR TRAINING (CLASSROOM)	BREAKFAST	EXPLOSIVE ORDNANCE RELAYING	ERDLATOR TRAINING	BREAKFAST
IN PROCESSING	0700	0730	CHEMICAL WARFARE								COURSE CRITIQUE
COMRADE/KEY PERSONNEL BRIEFING	0800	0830	"	"	"	"	"	"	"	"	CAMP CLOSE-OUT
	0900	0930	"	"	"	"	"	"	"	"	"
	1000	1030	HARVEST EAGLE WAR DAMAGE REPAIR/HOS	"	"	"	"	"	"	"	OUT PROCESSING
LUNCH	1100	1130	LUNCH			LUNCH		LUNCH			
PRIME BEEF ORIENTATION	1200	1230	HARVEST EAGLE EQUIP FAMILIARIZATION	REVERSE OSMOSIS TRAINING		RNR DEMO/ PERFORMANCE	SRC ORIENTATION	RAPID RUNWAY REPAIR PERFORMANCE			OUTBOUND
WAR DAMAGE REPAIR	1300	1330	"	"	"	"	"	"	"	"	OUTBOUND
WAR RESERVE MATERIAL	1400	1430	"	"	"	"	"	"	"	"	
DESERT ENVIRONMENT	1500	1530	"	"	"	"	"	"	"	"	
BRIEFING BY THE FLACI COMMANDER (OPTIONAL)	1600	1630	"	"	"	"	"	"	"	"	
DINNER	1700	1730	DINNER			DINNER		DINNER			

\*\*\*\*\* TIMES ON FIRST DAY DEPENDING ON ARRIVAL TIME

# Appendix B: Training Proficiency Code Key

PROFICIENCY CODE KEY		
	SCALE VALUE	DEFINITION The Individual
TASK PERFORMANCE LEVELS	1	Can do simple parts of the task. Needs to be told or shown how to do most of the task. (EXTREMELY LIMITED)
	2	Can do most parts of the task. Needs help only on hardest parts. May not meet local demands for speed or accuracy. (PARTIALLY PROFICIENT)
	3	Can do all parts of the task. Needs only a spot check of completed work. Meets minimum local demands for speed and accuracy. (COMPETENT)
	4	Can do the complete task quickly and accurately. Can tell or show others how to do the task. (HIGHLY PROFICIENT)
*TASK KNOWLEDGE LEVELS	a	Can name parts, tools, and simple facts about the task. (NOMENCLATURE)
	b	Can name the step by step procedures for doing the task. (PROCEDURES)
	c	Can explain why and when the task must be done and why each step is needed (OPERATING PRINCIPLES)
	d	Can predict, identify, and resolve problems about the task. (COMPLETE THEORY)
**SUBJECT KNOWLEDGE LEVELS	A	Can identify basic facts and terms about the subject. (FACTS)
	B	Can explain relationship of basic facts and state general principles about the subject (PRINCIPLES)
	C	Can analyze facts and principles and draw conclusions about the subject. (ANALYSIS)
	D	Can evaluate conditions and make proper decisions about the subject. (EVALUATION)
- EXPLANATIONS -		
<ul style="list-style-type: none"> <li>• A task knowledge scale value may be used alone or with a task performance scale value to define a level of knowledge for a specific task. (Examples b and 1b)</li> <li>•• A subject knowledge scale value is used alone to define a level of knowledge for a subject not directly related to any specific task, or for a subject common to several tasks.</li> <li>- This mark is used alone instead of a scale value to show that no proficiency training is provided in the course, or that no proficiency is required at this skill level.</li> <li>X This mark is used alone in course columns to show that training is not given due to limitations in resources.</li> </ul>		

(Proficiency Code Key - Qualitative Requirements, ATC Supplement/AFR 8-13)

### Appendix C: Weapon Training Objectives

The following weapon training objectives are from AFR 50-36, "Combat Arms and Maintenance Program Management," [50-36:21].

- a. The trainee must identify the rifle safety procedures.
- b. The trainee must state the nomenclature, characteristics, and cycle of functioning of the M-16 rifle.
- c. The trainee must identify the types of 5.56mm ammunition.
- d. The trainee must state the methods of destruction of the M16 rifle.
- e. Given the M16 rifle and proper tools, the trainee must disassemble and assemble the M16 rifle to the degree authorized for the user.
- f. Given the M16 rifle, proper equipment and materials, the trainee must perform preventive maintenance procedures. The trainee will have a maximum time limit of 35 minutes.
- g. Given an M16 magazine, the proper materials and equipment, the trainee must perform cleaning procedures on the M16 rifle.
- h. Given an M16 magazine, dummy ammunition, and the loading adapter, the trainee must correctly load and unload the magazine from a stripper clip and with individual rounds.
- i. Given an M16 rifle and a magazine loaded with dummy ammunition, the trainee must load and clear an M16 rifle.
- j. Given an M16 rifle and a magazine loaded with dummy ammunition, the trainee must perform the immediate action procedures.
- k. Given the proper equipment, the trainee must demonstrate the fundamentals of rifle marksmanship. (Triangulation exercises are mandatory for initial qualification training and optional, at the instructor's discretion, for remedial and recurring training.) The standard for triangulation is three consecutive three-shot groups with no group exceeding an extreme spread of 3/4 inch at 50 feet.
- l. Given an M16 rifle and appropriate tools, the trainee must make sight adjustments for windage and elevation.
- m. Given an M16 rifle, the trainee must assume each position of the M16 course of fire.
- n. Given an M16 rifle and proper ammunition, the trainee must zero his or her weapon and fire one three-shot group within the required target area.
- o. Given an M16 rifle and proper ammunition, the trainee must qualify on the M16 rifle qualification evaluation course of fire.

## Appendix D: Firing Requirements, M16 Rifle Air Force Qualification

### M16 RIFLE

Practice Fire Training Order	No of Rounds	Time (Sec)	Target	Range/Distance (yards or meters)
Zero (Prone)	9 (3 3-shot strings) (3 3-round magazines)	N/A	A at B at	25 100
1. Standing to Prone	5 (1 5-round magazine)	45	B at A at	100 25
2. Kneeling	6 (1 6-round magazine)	45	B at A at	100 25
3. Standing	6 (1 6-round magazine)	45	B at A at	100 25
4. Strong side (left or right) Barricade Standing	6 (load 3 & 3) (2 3-round magazines)	60	B at A at	100 25
5. Over Barricade Crouched	6 (load 3 & 3) (2 3-round magazines)	60	B at A at	100 25
6. Shoulder Point Crouch (Quick Fire)	6 (2 shots & recover)	3 per string	B at	25
44 Total Rounds				
Qualification Evaluation Firing				
Phase I				
Three-shot group firing (prone)	6 (2 3-shot strings) (2 3-round magazines)	30 per string	A at B at	25 100
Phase II				
1. Standing to Prone	5 (1 5-round magazine)	30	B at A at	100 25
2. Kneeling	6 (1 6-round magazine)	30	B at A at	100 25
3. Standing	6 (1 6-round magazine)	30	B at A at	100 25
4. Strong side (left or right) Barricade Standing	6 (load 3 & 3) (2 3-round magazines)	45	B at A at	100 25
5. Over Barricade Crouched	6 (load 3 & 3) (2 3-round magazines)	45	B at A at	100 25
6. Shoulder Point Crouch (Quick Fire)	6 (2 shots & recover)	3 per string	B at	25
41 Total Rounds				
Total Rounds For Course - 85				

#### COURSE INFORMATION:

1. Targets for the M16 rifle course follow:
  - a. Target A is scorable silhouette reduced for 25 yards or meters. NSN 6920-01-115-7626.
  - b. Target B is full-size scorable silhouette (do not score hits outside the six ring when scoring the AFQC). Standing Silhouette Target. NSN 6920-00-713-5385 can be used. NSN for full-size scorable silhouette is 6920-01-115-7627.
2. Qualification Standards:
  - a. Phase I - one of two three-shot groups in eight ring of target.
  - b. Phase II
    - (1) Qualified: 245 - 279
    - (2) Proficient: 280 - 309
    - (3) Expert: 310 - 350

## Appendix E: Chemical Warfare Standards

These Standards are listed in AFR 355-1, "Planning and Operations," [355-1:86]:

### Course # 8 - CW Defense (Initial and Refresher)

1. CW Defense:
  - a. CW threat. A
  - b. CW agent effects. A
  - c. Recognize symptoms. b
  - d. Use antidote injectors. 3c
  - e. Use personal decontamination kits. 3c
  - f. Personal protective equipment:
    - (1) Determine correct size and fit. 2b
    - (2) Inspect. 2b
    - (3) Don and doff. 3c
    - (4) Use. 3c
    - (5) Maintenance and storage. B
  - g. Use detection paper, tape, and M-256 kit. 2b
  - h. Collective protection facilities. B
  - i. Process and in and out of contamination control area. 3c
  - j. Contamination avoidance. B
  - k. Expedient decontamination. B
  - l. Mask confidence exercise. 3c
2. Biological Warfare (BW) Defense:
  - a. Basic BW threat. A
  - b. Broad category of BW agents. A
  - c. Protective measures. B
3. Conventional Attack Defense:
  - a. Threat and broad category of munition types. A
  - b. Hazards. B
  - c. Protective measures. B
  - d. Unexploded ordnance:
    - (1) Recognize. 1a
    - (2) Mark. b
4. Warning and Notification Systems:
  - a. Warning signals. C
  - b. Required actions. C
  - c. Notification system. B
  - d. Procedures for alert recall and reporting duty status. B
5. Reporting Procedures: B
  - a. What to report.
  - b. How to report.
  - c. Communications security (COMSEC).

## Appendix F: Proposed Security Training Requirements

1. The discipline to defend, communicate, move, and shoot in a coordinated manner requires development of individual and group skills. The skills include, but should not be limited to, fundamentals of air base ground defense; personal protection; unarmed defense; sectorization; fire team tactics, convoy tactics and procedures; M-16 assembly, disassembly and use; M-60 familiarization; and the use of grenades, flares, smoke and pyrotechnics [1:14,15].

2. Skills learned in Fundamentals of Ground Defense should involve factors that are used in the establishment of air base ground defense. Some of these factors are the proper use of terrain, proper use of barriers, coordinated fire plans, movement in a defensive area, and all-around defense. Establishing and maintaining security for equipment compounds and project site sector boundaries should also be included in this topic [1:15].

3. In the area of personal protection, the students must learn the skills of using camouflage, cover, and concealment without being detected by the enemy. The student should know the methods of concealment, blending and disguising, not just themselves but their equipment, through the use of camouflage techniques [1:15].

4. In the area of unarmed defense, it must be stressed to the students the importance of unarmed personal protection when confronting an enemy. Essential principles should include the basics of using the hand, both open and closed, using different parts of the foot, the elbows, and the knees as weapons [1:15,16].

5. In the training area of fire team tactics, the students should be taught to understand that learning the skills of fire and movement will be extremely valuable to them in combat situations. It must be demonstrated to the student the techniques of falling, rolling, crawling, and rushing to an objective vehicle at all time making valuable use of any cover or concealment available [1:16].

6. Convoy procedures should include being able to move from one place to another with the necessary men and equipment using military vehicles. This lesson plan should make the students aware of the preplanning and coordination that must be made before a convoy gets underway [1:16, 17].

7. The students should be provided with an M-16 rifle and the instructors should discuss and explain the nomenclature of this weapon, along with a description and operational characteristics. The instructors should demonstrate disassembly, assembly, and function check of the weapon. The students should then be evaluated individually on their ability to disassemble, assemble, and make a proper weapons function check [1:17].

8. The instructor should identify the types of flares, smoke grenades, and the different pyrotechnics. The instructors should explain, illustrate, and demonstrate the use of these different pyrotechnics. The student should then be evaluated by written tests [1:17].

# Appendix G: Approved Ancillary Training Programs

PROGRAM/ REFERENCE	OPR	FREQUENCY AND RECOMMENDATION DURATION	TARGET GROUP
M16 Rifle AFR 50-57	AF/IG	Annual; 8 hrs initial 5 1/2 hrs recurring	Individual who in the performance of their duty are occasionally armed or who have a possible combat commit- ment with a M16 rifle.
EOR AFR 355-1 AFR 136-10	AF/LE	Initial and at the discretion of the major commander; limit refresher training to only personnel overseas and conduct in conjunct- ion with CW defense; 11 minutes.	All base military personnel overseas & CONUS personnel assigned to mobility positions.
Self-Aid & Buddy Care AFR 50-20	AF/SG	Annual; 4 hrs initial 2 hrs refresher every 3 years.	All military personnel overseas & those in the CONUS assigned to mobility positions.
Chemical Warfare Defense Training For High Threat Areas AFR 355-1	AF/XO	Initial: Classroom 4 hrs with additional control area/mask conf- idence training as req- uired. Refresher: Class- room 2 hrs with addition- al chemical control area/ as required.	All personnel assigned or deployable to HTAs.
Government Vehicle Operator Classroom Training AFR 50-24	AF/IG	One time/ 3hrs	Military and Civilian personnel under age 26 who apply for a govt. drivers license.

Appendix H: List of Bases in Population

CONUS Commands

Air Force Logistics Command

Hill AFB, Utah  
McClellan AFB, California  
Robins AFB, Georgia  
Tinker AFB, Oklahoma  
Wright-Patterson AFB, Ohio

Air Force Systems Command

Edwards AFB, California  
Eglin AFB, Florida  
Hanscom AFB, Massachusetts  
Patrick AFB, Florida

Air Training Command

Chanute AFB, Illinois  
Columbus AFB, Mississippi  
Goodfellow AFB, Texas  
Keesler AFB, Mississippi  
Laughlin AFB, Texas  
Lowry AFB, Colorado  
Mather AFB, California  
Reese AFB, Texas  
SARPMA, Texas  
Sheppard AFB, Texas  
Williams AFB, Arizona

Military Airlift Command

Altus AFB, Oklahoma  
Andrews AFB, Maryland  
Bolling AFB, District of Columbia  
Charleston AFB, South Carolina  
Dover AFB, Delaware  
Hurlburt FLD, Florida  
Kirtland AFB, New Mexico  
Little Rock AFB, Arkansas  
McChord AFB, Washington  
McGuire AFB, New Jersey  
Norton AFB, California  
Pope AFB, North Carolina  
Scott AFB, Illinois  
Travis AFB, California



### Strategic Air Command

Barksdale AFB, Louisiana  
Beale AFB, California  
Blytheville AFB, Arkansas  
Carswell AFB, New Mexico  
Castle AFB, California  
Dyess AFB, Texas  
Ellsworth AFB, South Dakota  
F. E. Warren AFB, Wyoming  
Fairchild AFB, Washington  
Grand Forks AFB, North Dakota  
Griffis AFB, New York  
Grissom AFB, Indiana  
K.I. Sawyer AFB, Michigan  
Loring AFB, Maine  
Malmstrom AFB, Montana  
March AFB, California  
McConnell AFB, Kansas  
Minot AFB, North Dakota  
Offutt AFB, Nebraska  
Pease AFB, New Hampshire  
Plattsburg AFB, New York  
Vandenberg AFB, California  
Whiteman AFB, Missouri  
Wurtsmith AFB, Michigan

### Tactical Air Command

Bergstrom AFB, Texas  
Cannon AFB, New Mexico  
Davis Monthan AFB, Arizona  
England AFB, Louisiana  
George AFB, California  
Holloman AFB, New Mexico  
Homestead AFB, Florida  
Langley AFB, Virginia  
Luke AFB, Arizona  
MacDill AFB, Florida  
Moody AFB, Georgia  
Mountain Home AFB, Idaho  
Myrtle Beach AFB, Florida  
Nellis AFB, Nevada  
Seymour Johnson AFB, North Carolina  
Shaw AFB, South Carolina  
Tyndall AFB, Florida

### Space Command

Peterson AFB, Colorado

**Air University**

Maxwell AFB, Alabama

**Air Force Academy**

Air Force Academy, Colorado

**NonCONUS Commands**

**Alaskan Air Command**

Elmendorf AFB, Alaska  
Eielson AFB, Alaska

**Pacific Air Force**

Clark AB, Philippines  
Hickam AFB, Hawaii  
Kadena AB, Japan

**U.S. Air Forces Europe**

**NOTE:** The following bases had mobile and RRR teams.

Aviano AB, Italy  
Bitburg AB, Germany  
Hahn AB, Germany  
Ramstein AB, Germany  
Sembach AB, Germany  
Spangdahlem AB, Germany  
Torrejon AB (only mobile team), Spain  
Zweibrucken (only RRR team), Germany

Appendix I: Cover Letters and Survey Questionnaires

AFIT/LS (Capt Emmitt Smith, AV 785-4437)

2 May 1984

Prime BEEF Home Station Training Survey

Base Civil Engineer

1. Please forward the attached survey to your Prime BEEF Manager as the survey is part of an Air Force research project on Prime BEEF training. A complete explanation is contained in the attached letter.



EMMITT G. SMITH, Captain, USAF  
Resident Graduate Student

3 Atch  
Letter  
Questionnaire  
Return envelope



DEPARTMENT OF THE AIR FORCE  
AIR FORCE INSTITUTE OF TECHNOLOGY (ATC)  
WRIGHT-PATTERSON AIR FORCE BASE, OH 45433

REPLY TO  
ATTN OF: AFIT/LS (Capt Emmitt Smith, AV 785-4437)

2 May 1984

SUBJECT: Prime BEEF Home Station Training Survey

TO: Prime BEEF Manager

1. You have been selected to participate in an Air Force research project which is important to Air Force civil engineers. Your responses to the questions in the attached survey will be used to determine the amount of wartime training civil engineering personnel currently receive at the base level and how that training is being conducted. The data you provide will help in formulating plans to improve the existing Home Station Training program. Improvements in our Home Station Training programing will better prepare our troops to accomplish their wartime mission.

2. We ask that you be among those who will take a few minutes to provide this important Prime BEEF training information. We believe the time required to answer the survey is only about 15-20 minutes; Wright-Patterson AFB's Prime BEEF Manager completed the survey in 15 minutes.

3. Please answer each question as accurately and truthfully as possible. All responses are completely confidential, and no attempt will be made to identify any individual with specific survey responses.

4. This survey has been approved (RCS: HAF-LEE (OT) 84001) by Headquarters USAF.

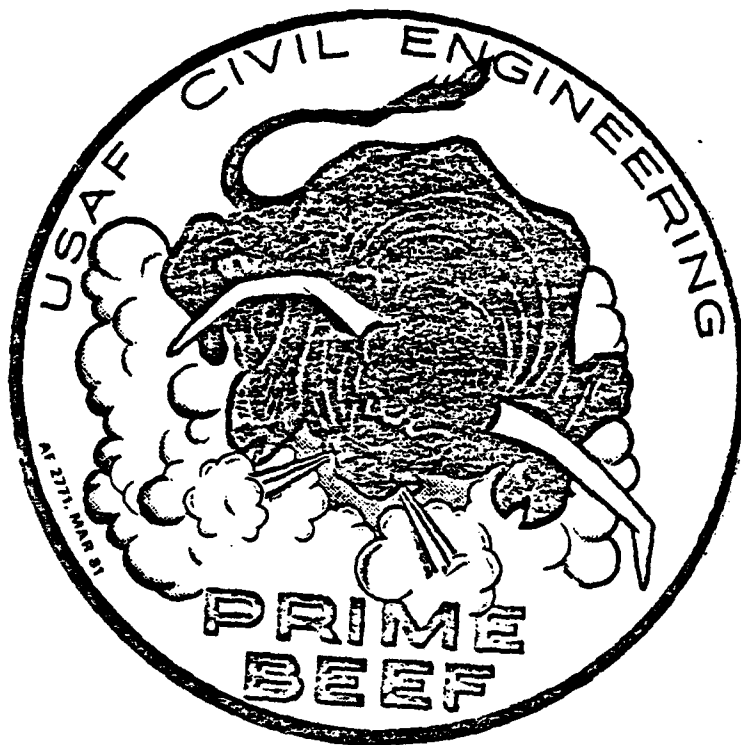
5. Please return the completed survey form in the envelope provided within one week of receipt.

6. Your participation is sincerely appreciated.

Loren E. Exley, Colonel, USAF  
Acting Dean  
School of Systems and Logistics

2 Atch  
Return envelope  
Questionnaire

CONUS, AAC, and PACAF Questionnaire



SURVEY TO DETERMINE THE AMOUNT AND METHODS OF  
PRIME BEEF HOME STATION TRAINING

SURVEY TO DETERMINE THE AMOUNT AND METHODS OF  
PRIME BEEF HOME STATION TRAINING

Please use the following definitions when answering the questions on this survey.

HOME STATION TRAINING. Training scheduled and/or conducted at the base level to accomplish the training requirements in AFR 93-3. For CONUS bases Home Station Training does NOT include the week long training exercises conducted at Field 4, Eglin AFB:

WAR RESERVE MATERIAL FIELD EQUIPMENT. Examples of WRM field equipment are Harvest Bare and Harvest Eagle assets. Air Force bases usually do not have Harvest Bare or Harvest Eagle kits, therefore most Home Station WRM training is conducted using lectures or films.

METHODS OF TRAINING

LECTURE. A lecture is a verbal explanation by an instructor to convey information. Airmen participation is limited to asking questions and answering questions.

DEMONSTRATION. A demonstration is designed to SHOW airmen what they are expected to do and how to do it. Demonstrations include displays, field or troop presentations, and skits.

FILMS. This method of training is conducted using commercially produced films or sound-on-slide presentations obtained through the Base Film Library or the Defense Audiovisual Directory. This method of training does NOT include locally made films or sound-on-slide presentation. Training which uses locally made films or slides should be listed in the OTHER methods of training.

HANDS-ON. This method of training occurs when one or more airmen actually perform the task.

ALL OF THE ABOVE METHODS OF TRAINING CAN BE CONDUCTED IN A CLASSROOM OR DURING A FIELD TRAINING EXERCISE/ANNUAL BIVOUAC.

EXAMPLES: A lecture on military sanitation could be given in a classroom or in the field during a training exercise.

Hands-on training of the disassembly, assembly, and cleaning of the M-16 rifle could be given in a classroom or in the field during a training exercise.

1. What major Air Force command do you belong to?

<input type="checkbox"/> AAC	<input type="checkbox"/> PACAF
<input type="checkbox"/> AFLC	<input type="checkbox"/> SAC
<input type="checkbox"/> AFSC	<input type="checkbox"/> TAC
<input type="checkbox"/> ATC	<input type="checkbox"/> OTHER
<input type="checkbox"/> MAC	

If OTHER, please specify \_\_\_\_\_

2. Does your unit have a CF-1, CF-2, or CF-3 team(s) or, if your unit has reorganized into the new PB-1 through PB-26 team concept, did you have a CF-1, 2, or 3 team prior to the reorganization.

☐ YES ☐ NO

IF YES, PLEASE ANSWER THE FOLLOWING QUESTIONS.

3. Rapid Runway Repair Training

a. How many hours annually (past 12 months) does a CF-1, 2, or 3 team member spend in HOME STATION Rapid Runway Repair Training?

\_\_\_\_\_ hours

b. Of the above total Rapid Runway Training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION  
\_\_\_\_\_ hours FILMS  
\_\_\_\_\_ hours HANDS-ON  
\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

4. Weapons Training

a. How many hours annually (past 12 months) does an airman of your CF-1, 2, or 3 team(s) spend in HOME STATION weapons (M16) training?

\_\_\_\_\_ hours

b. Of the above total weapons training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION  
\_\_\_\_\_ hours FILMS  
\_\_\_\_\_ HANDS-ON  
\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

5. Military Sanitation Training

- a. How many hours annually (past 12 months) does a CF-1, 2, or 3 team member spend in HOME STATION military sanitation training?

\_\_\_\_\_ hours

- b. Of the above total military sanitation training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION

\_\_\_\_\_ hours FILMS

\_\_\_\_\_ hours HANDS-ON

\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

6. Expedient Repair Methods Training

- a. How many hours annually (past 12 months) does a CF-1, 2, or 3 team member spend in HOME STATION expedient repair methods training?

\_\_\_\_\_ hours

- b. Of the above total expedient repair methods training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION

\_\_\_\_\_ hours FILMS

\_\_\_\_\_ hours HANDS-ON

\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

7. Explosive Ordnance Reconnaissance Training

- a. How many hours annually (past 12 months) does a CF-1, 2, or 3 team member spend in HOME STATION explosive ordnance reconnaissance (EOR) training?

\_\_\_\_\_ hours

- b. Of the above total EOR training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION

\_\_\_\_\_ hours FILMS

\_\_\_\_\_ hours HANDS-ON

\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_



AD-A146 957

AN EXAMINATION OF THE AIR FORCE CIVIL ENGINEERING'S  
PRIME BEEF HOME STATI.. (U) AIR FORCE INST OF TECH  
WRIGHT-PATTERSON AFB OH SCHOOL OF SVST.. E G SMITH

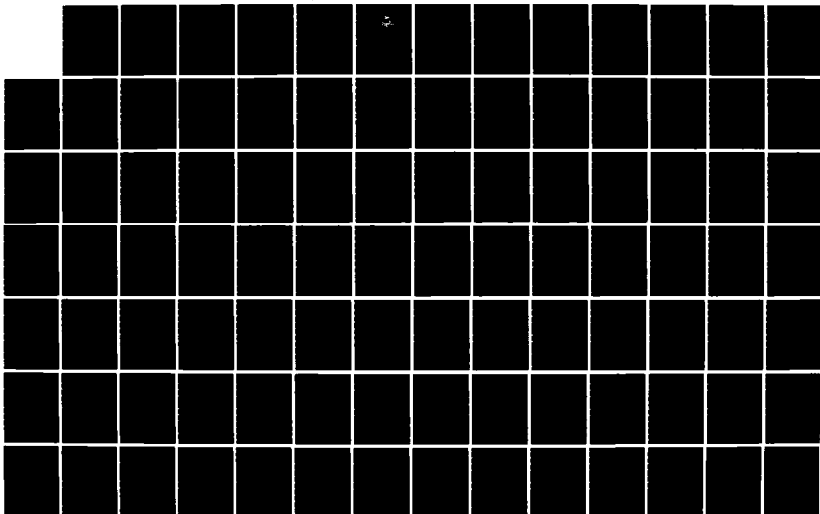
3/4

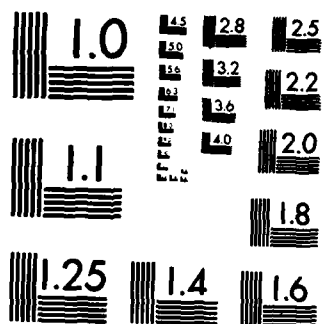
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SEP 84 AFIT/GEM/LSM/845-18

F/G 5/9

NL





8. Chemical Warfare Training

Includes Task Qualification Training and training conducted by Disaster Preparedness.

- a. How many hours annually (past 12 months) does a CF-1, 2, or 3 team member spend in HOME STATION chemical warfare training?

\_\_\_\_\_ hours

- b. Of the above total chemical warfare training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION

\_\_\_\_\_ hours FILMS

\_\_\_\_\_ hours HANDS-ON

\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

9. Personal, Work Party, and Convoy Security Training

Includes Phase I and Phase II training.

- a. How many hours annually (past 12 months) does a CF-1, 2, or 3 team member spend in HOME STATION security training?

\_\_\_\_\_ hours

- b. Of the above total security training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION

\_\_\_\_\_ hours FILMS

\_\_\_\_\_ hours HANDS-ON

\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

## 10. Government Vehicle Training

Only include training performed which was due to Prime BEEF requirements (AFR 93-3; AFP 93-7); not training required by team member's job.

- a. How many hours annually (past 12 months) does a member of your EQUIPMENT section spend in HOME STATION government vehicle training?

\_\_\_\_\_ hours

- b. Of the above total government vehicle training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION

\_\_\_\_\_ hours FILMS

\_\_\_\_\_ hours HANDS-ON

\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

- c. How many hours annually does a member of your CF-1, 2, or 3 team(s), who is NOT an equipment operator, spend in HOME STATION government vehicle training?

\_\_\_\_\_ hours

- d. Of the above total government vehicle training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION

\_\_\_\_\_ hours FILMS

\_\_\_\_\_ hours HANDS-ON

\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

## 11. War Reserve Material Field Equipment Training

- a. How many hours annually (past 12 months) does a CF-1, 2, or 3 team member spend (HOME STATION) training on the layout, erection and maintenance of War Reserve Material (WRM) field equipment?

\_\_\_\_\_ hours

- b. Of the above total WRM field equipment training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION

\_\_\_\_\_ hours FILMS

\_\_\_\_\_ hours HANDS-ON

\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

12. Field Bivouacs - Home Station

- a. How many days annually (past 12 months) does a CF-1, 2, or 3 team member spend on field bivouac?

\_\_\_\_\_ days

- b. Are your field bivouacs conducted on or off the base?

\_\_\_\_\_ ON \_\_\_\_\_ OFF

Please use the following definitions for the next question.

**PARTICIPATE:** Act as instructors, aggressors; or train with civil engineering personnel.

**SUPPORT:** Provide vehicles, equipment, supplies, or personnel such as medics to support the bivouac.

- c. Do any base, state, federal or other organizations participate in or support, or do both for your field bivouacs.

(x) PARTICIPATE and/or (x) SUPPORT

SECURITY POLICE  
HOSPITAL/MEDICAL CENTER  
DISASTER PREPAREDNESS  
TRANSPORTATION  
SUPPLY  
FOOD SERVICES  
EXPLOSIVE ORDNANCE DET.

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AIR FORCE RESERVE  
AIR NATIONAL GUARD  
ARMY  
ARMY RESERVE  
ARMY NATIONAL GUARD

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NAVY  
NAVY RESERVE  
MARINES  
MARINE RESERVE

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If OTHERS, please specify

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\_\_\_\_\_  
\_\_\_\_\_

### 13. Training Equipment

- a. Please indicate whether your unit has, or is authorized to have, a Contingency Support Set (CSS), a Home Station Training Set, a CF-2 Team Kit, and/or a RRR mini-kit.

\_\_\_\_\_ CSS  
\_\_\_\_\_ HSTS

\_\_\_\_\_ CF-2 Team Kit  
\_\_\_\_\_ RRR mini-kit

- b. If your unit has a Contingency Support Set, does the set contain all the required equipment as specified by AFR 93-3?

\_\_\_\_\_ YES

\_\_\_\_\_ NO

If NO, what percentage (10%, 20%, etc.) of the CSS kit is missing?

\_\_\_\_\_ percent

- c. If your unit has a Home Station Training Set, does the set contain all the required equipment as specified by AFR 93-3?

\_\_\_\_\_ YES

\_\_\_\_\_ NO

If NO, what percentage (10%, 20%, etc.) of the HSTS kit is missing?

\_\_\_\_\_ percent

- d. If your unit has a CF-2 Team Kit, does the kit contain all the required equipment as specified by AFR 93-3?

\_\_\_\_\_ YES

\_\_\_\_\_ NO

If NO, what percentage of the CF-2 Team Kit is missing?

\_\_\_\_\_ percent.

- e. If your unit has a RRR mini kit, does the kit contain all the required equipment as specified by AFR 93-3?

\_\_\_\_\_ YES

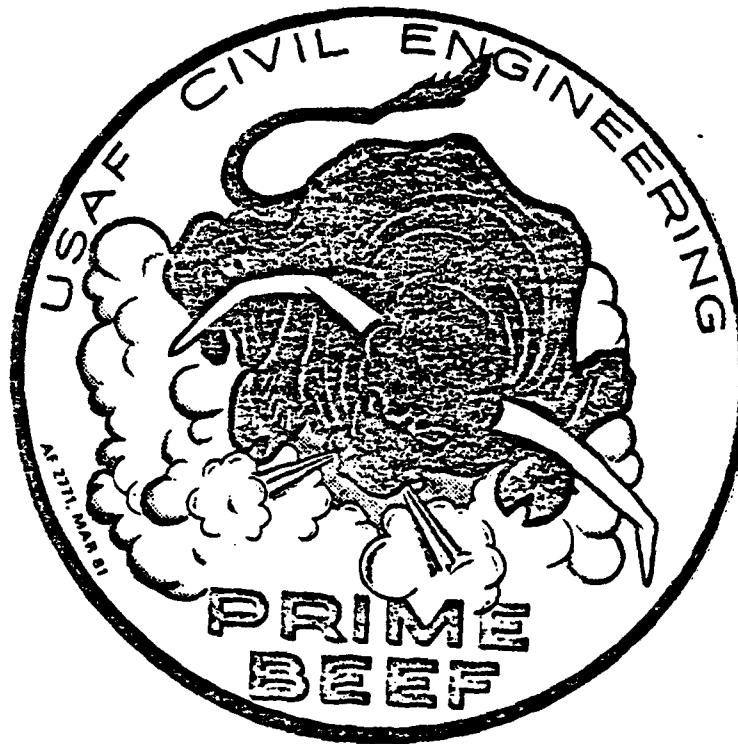
\_\_\_\_\_ NO

If NO, what percentage of the RRR mini kit is missing?

\_\_\_\_\_ percent.

Thank you for answering this survey. Please return the survey in the attached envelope.

USAFE Questionnaire



SURVEY TO DETERMINE THE AMOUNT AND METHODS OF  
PRIME BEEF HOME STATION TRAINING

SURVEY TO DETERMINE THE AMOUNT AND METHODS OF  
PRIME BEEF HOME STATION TRAINING

Please use the following definitions when answering the questions on this survey.

HOME STATION TRAINING. Training scheduled and/or conducted at the base level to accomplish the training requirements in USAFE's draft supplement to AFR 93-3. Home Station Training does NOT include the week long training exercises conducted at Ramstein AFB, Germany by the 7002 CEF.

WAR RESERVE MATERIAL FIELD EQUIPMENT. Examples of WRM field equipment are Harvest Bare and Harvest Eagle assets. Bases usually do not have Harvest Bare or Harvest Eagle assets, therefore most Home Station WRM training is conducted using lectures or films.

METHODS OF TRAINING

LECTURE. A lecture is a verbal explanation by an instructor to convey information. Airmen participation is limited to asking questions and answering questions.

DEMONSTRATION. A demonstration is designed to SHOW airmen what they are expected to do and how to do it. Demonstrations include displays, field or troop presentations, and skits.

FILMS. This method of training is conducted using commercially produced films or sound-on-slide presentations obtained through the Base Film Library or the Defense Audiovisual Directory. This method of training does NOT include locally made films or sound-on-slide presentation. Training which uses locally made films or slides should be listed in the OTHER methods of training.

HANDS-ON. This method of training occurs when one or more airmen actually perform the task.

ALL OF THE ABOVE TRAINING CAN BE CONDUCTED IN A CLASSROOM OR DURING A FIELD TRAINING EXERCISE.

EXAMPLES: A lecture on military sanitation could be given in a classroom or in the field during a training exercise.

Hands-on training of the disassembly, assembly, and cleaning of the M-16 rifle could be given in a classroom or in the field during a training exercise.



1. What Air Force command do you belong to?

\_\_\_\_\_ 16th AF \_\_\_\_\_ 17th AF \_\_\_\_\_ OTHER

If OTHER, please specify \_\_\_\_\_

2. Does your unit have a Prime BEEF MOBILE TEAM?

\_\_\_\_\_ YES \_\_\_\_\_ NO

IF YES, PLEASE ANSWER THE FOLLOWING QUESTIONS.

3. Rapid Runway Repair Training

a. How many hours annually (past 12 months) does a member of your mobile team spend in HOME STATION Rapid Runway Repair Training?

\_\_\_\_\_ hours

b. Of the above total Rapid Runway Training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION

\_\_\_\_\_ hours FILMS

\_\_\_\_\_ hours HANDS-ON

\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

4. Weapons Training

a. How many hours annually (past 12 months) does an airman of your mobile team spend in HOME STATION weapons (M16) training?

\_\_\_\_\_ hours

b. Of the above total weapons training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION

\_\_\_\_\_ hours FILMS

\_\_\_\_\_ HANDS-ON

\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

5. Military Sanitation Training

- a. How many hours annually (past 12 months) does a member of your mobile team spend in HOME STATION military sanitation training?

\_\_\_\_\_ hours

- b. Of the above total military sanitation training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION

\_\_\_\_\_ hours FILMS

\_\_\_\_\_ hours HANDS-ON

\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

6. Expedient Repair Methods Training

- a. How many hours annually (past 12 months) does a member of your mobile team spend in HOME STATION expedient repair methods training?

\_\_\_\_\_ hours

- b. Of the above total expedient repair methods training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION

\_\_\_\_\_ hours FILMS

\_\_\_\_\_ hours HANDS-ON

\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

7. Explosive Ordnance Reconnaissance Training

- a. How many hours annually (past 12 months) does a member of your mobile team spend in HOME STATION explosive ordnance reconnaissance (EOR) training?

\_\_\_\_\_ hours

- b. Of the above total EOR training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION

\_\_\_\_\_ hours FILMS

\_\_\_\_\_ hours HANDS-ON

\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

8. Chemical Warfare Training

Includes Task Qualification Training and training conducted by Disaster Preparedness.

- a. How many hours annually (past 12 months) does a member of your mobile team spend in HOME STATION chemical warfare training?

\_\_\_\_\_ hours

- b. Of the above total chemical warfare training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION

\_\_\_\_\_ hours FILMS

\_\_\_\_\_ hours HANDS-ON

\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

9. Personal, Work Party, and Convoy Security Training

Includes Phase I and Phase II training.

- a. How many hours annually (past 12 months) does a member of your mobile team spend in HOME STATION security training?

\_\_\_\_\_ hours

- b. Of the above total security training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION

\_\_\_\_\_ hours FILMS

\_\_\_\_\_ hours HANDS-ON

\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

#### 10. Government Vehicle Training

Only include training performed which was due to Prime BEEF requirements (AFR 93-3; AFP 93-7); not training required by team member's job.

- a. How many hours annually (past 12 months) does a member of your mobile team spend in HOME STATION government vehicle training?

\_\_\_\_\_ hours

- b. Of the above total government vehicle training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION

\_\_\_\_\_ hours FILMS

\_\_\_\_\_ hours HANDS-ON

\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

#### 11. War Reserve Material Field Equipment Training

- a. How many hours annually (past 12 months) does a member of your mobile team spend (HOME STATION) training on the layout, erection and maintenance of War Reserve Material (WRM) field equipment?

\_\_\_\_\_ hours

- b. Of the above total WRM field equipment training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION

\_\_\_\_\_ hours FILMS

\_\_\_\_\_ hours HANDS-ON

\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

12. Field Training/Bivouacs

- a. How many days annually (past 12 months) does a member of your mobile team spend deployed on field training/bivouacs?

\_\_\_\_\_ days

- b. Within the past 12 months was your field training conducted by the 7002 CEF at Ramstein AFB or was the field training conducted by deploying in support of an exercise?

\_\_\_\_\_ Ramstein AFB

\_\_\_\_\_ EXERCISE

13. Training Equipment

- a. Please indicate whether your unit has a Contingency Support Set (CSS) and/or a CF-2 Team Kit?

\_\_\_\_\_ CSS

\_\_\_\_\_ CF-2 Team Kit

- b. If your unit has a Contingency Support Set, does the set contain all the required equipment as specified by USAFE's supplement to AFR 93-3?

\_\_\_\_\_ YES

\_\_\_\_\_ NO

If NO, what percentage (10%, 20%, etc.) of the CSS kit is missing?

\_\_\_\_\_ percent

- c. If your unit has a CF-2 Team Kit, does the kit contain all the required equipment as specified by USAFE's supplement to AFR 93-3?

\_\_\_\_\_ YES

\_\_\_\_\_ NO

If NO, what percentage of the CF-2 Team Kit is missing?

\_\_\_\_\_ percent.

14. Does your unit have a Rapid Runway Repair (RRR) Team?

\_\_\_\_\_ YES

\_\_\_\_\_ No

IF YES, PLEASE ANSWER THE FOLLOWING QUESTIONS.

15. Rapid Runway Repair Training

- a. How many hours annually (past 12 months) does a member of your RRR team spend in HOME STATION rapid runway repair training?

\_\_\_\_\_ hours

- b. Of the above total Rapid Runway Training Time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION

\_\_\_\_\_ hours FILMS

\_\_\_\_\_ hours HANDS-ON

\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

16. Government vehicle training

Only include training performed which was due to Prime BEEF requirements (AFR 93-3, AFP 93-7); not training required by team member's job.

- a. How many hours annually (past 12 months) does a member of your RRR team EQUIPMENT SECTION spend in HOME STATION government vehicle training?

\_\_\_\_\_ hours

- b. Of the above total government vehicle training time, how many hours were spent in each of the following methods of training?

\_\_\_\_\_ hours LECTURE and/or DEMONSTRATION

\_\_\_\_\_ hours FILMS

\_\_\_\_\_ hours HANDS-ON

\_\_\_\_\_ hours OTHER

If OTHER, please specify \_\_\_\_\_

Thank you for answering this survey. Please return the survey in the attached envelope.

# Appendix J: Data File

## CONUS, AAC, and PACAF Data

0011	3	1	3.0	0.5	0.5	2.0	0.0	4.0	2.0	0.0	2.0	0.0
0012			1.0	0.5	0.5	0.0	0.0	4.5	1.0	0.5	3.0	0.0
0013			1.5	0.0	0.5	0.0	1.0	3.0	1.5	1.0	0.5	0.0
0014			2.5	1.0	0.5	1.0	0.0	2.0	0.5	0.0	1.5	0.0
0015			1.0	0.0	0.0	1.0	0.0	0.5	0.0	0.5	0.0	0.0
0016	2.0	1		101				1011111				
0017	10110.0				97.0	0.0						
0021	3	1	8.0	2.0	2.0	4.0	0.0	8.0	4.0	0.0	4.0	0.0
0022			2.0	0.5	0.5	1.0	0.0	2.0	1.0	1.0	0.0	0.0
0023			1.0	0.5	0.5	0.0	0.0	8.0	4.0	0.0	2.0	2.0
0024			8.0	2.0	2.0	4.0	0.0					
0025								0.0	0.0	0.0	0.0	0.0
0026	3.0	2		0110001				001				
0027	111160.0			100.00.0	0.0							
0031	3	1	4.0	0.5	0.5	3.0	0.0	4.0	0.75	0.25	3.0	0.0
0032			4.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0
0033			2.0	1.0	1.0	0.0	0.0	4.0	2.0	2.0	0.0	0.0
0034			3.0	1.0	2.0	0.0	0.0					
0035								4.0	1.0	0.0	3.0	0.0
0036	0.0											
0037	0	11			0.0	0.0						
0041	4	1	3.0	0.5	0.5	2.0	0.0	4.0	2.0	0.0	2.0	0.0
0042			1.0	1.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0
0043			2.0	0.0	0.5	1.5	0.0	6.0	2.5	0.5	3.0	0.0
0044			10.0	4.0	0.0	6.0	0.0	8.0	1.0	0.5	6.5	0.0
0045			8.0	1.0	0.5	6.5	0.0	0.0	0.0	0.0	0.0	0.0
0046	5.0	1		00100000000100001				101001000001				
0047	0111			5.0	0.0	30.0						
0051	4	1	2.0	0.0	1.0	1.0	0.0	5.0	4.0	0.0	0.0	1.0
0052			0.75	0.0	0.75	0.0	0.0	0.5	0.5	0.0	0.0	0.0
0053			2.0	0.5	1.5	0.0	0.0	6.0	4.0	0.0	2.0	0.0
0054			1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0055			0.0	0.0	0.0	0.0	0.0	1.5	0.5	1.0	0.0	0.0
0056	3.0	1		111				000111000001				
0057	0111			5.0	0.0	0.0						
0061	4	1	5.0	0.5	0.5	4.0	0.0	8.0	1.0	0.0	7.0	0.0
0062			3.0	0.0	2.0	1.0	0.0	3.0	1.0	0.0	2.0	0.0
0063			3.0	2.0	0.0	1.0	0.0	10.5	3.0	0.0	7.5	0.0
0064			8.0	2.0	0.0	6.0	0.0	4.0	0.0	0.0	4.0	0.0
0065			1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
0066	4.0	1		1010001				111111110001				
0067	0111			50.0	30.0	100.0						

0071	4 1	4.0	1.0	2.0	1.0	0.0	104.07.0	1.0	96.0	0.0
0072		1.0	1.0	0.0	0.0	0.0	2.0	1.0	0.0	1.0
0073		1.0	0.5	0.5	0.0	0.0	6.0	3.0	1.0	2.0
0074		16.0	4.0	0.0	12.0	0.0	1.0	0.0	0.0	1.0
0075		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0076	14.02		111000000000000001				101101000100000001			
0077	0011		5.0	15.0						
0081	4 1	8.0	2.0	0.0	4.0	2.0	8.0	2.0	0.0	6.0
0082		4.0	4.0	0.0	0.0	0.0	8.0	4.0	0.0	4.0
0083		4.0	4.0	0.0	0.0	0.0	8.0	2.0	0.0	4.0
0084		12.0	3.0	0.0	9.0	0.0	4.0	0.0	0.0	4.0
0085		4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0
0086	4.0 2		001000000100000000				010110000000000001			
0087	0111		10.0	5.0	0.0					
0091	4 1	4.0	2.0	0.0	2.0	0.0	8.0	4.0	0.0	4.0
0092		3.0	2.0	1.0	0.0	0.0	4.0	2.0	2.0	0.0
0093		1.0	0.0	1.0	0.0	0.0	8.0	2.0	2.0	4.0
0094		12.0	6.0	0.0	6.0	0.0	1.0	0.0	0.0	1.0
0095										
0096	4.0 1		000000000000000000				001101000000000000			
0097	0111		0.0	2.0	5.0					
0101	2 1	12.0	2.0	0.5	9.5	0.0	4.0	1.0	0.0	3.0
0102		8.0	1.5	1.0	5.5	0.0	16.0	4.0	0.0	12.0
0103		0.5	0.5	0.0	0.0	0.0	7.5	2.0	1.5	4.0
0104		2.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0
0105							6.0	1.0	0.5	4.0
0106	4.0 1		111010000000000001				100101000000000001			
0107	0111		0.0	0.0	0.0					
0111	4 1	6.0	1.0	1.0	4.0	0.0	6.0	4.0	0.0	2.0
0112		2.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0
0113		1.0	1.0	0.0	0.0	0.0	6.0	2.0	2.0	2.0
0114		2.0	0.0	2.0	0.0	0.0	10.0	2.0	2.0	6.0
0115		2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
0116	2.0 2		1101001				10001			
0117	0100		50.0							
0121	4 1	6.0	0.5	0.5	5.0	0.0	3.0	1.0	0.0	2.0
0122		1.5	1.0	0.5	0.0	0.0	1.5	1.5	0.0	0.0
0123		1.0	1.0	0.0	0.0	0.0	6.0	2.5	0.5	3.0
0124		2.0	1.5	0.5	0.0	0.0	1.0	1.0	0.0	0.0
0125		2.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
0126	0.0 1		1				0101			
0127	0111		10.0	1.0	0.0					
0131	4 1	3.0	1.0	0.5	1.5	0.0	8.0	4.0	0.0	4.0
0132		2.0	1.5	0.5	0.0	0.0	4.0	0.5	0.5	3.0
0133		2.0	0.5	0.5	1.0	0.0	8.0	4.0	0.0	4.0
0134		8.0	4.0	0.0	4.0	0.0	416.0100.00.0			316.00.0
0135		60.0	30.0	0.0	30.0	0.0				
0136	6.0 2		101				111111			
0137	0 11			2.0	10.0					



0141	2 1	53.0	3.0	1.0	48.0	1.0	30.0	5.0	1.0	24.0	0.0
0142		12.0	3.0	1.0	8.0	0.0	66.0	2.0	0.0	64.0	0.0
0143		52.0	2.0	1.0	48.0	1.0	60.0	6.0	1.0	53.0	0.0
0144		61.0	4.0	1.0	56.0	0.0	8.0	0.0	0.0	8.0	0.0
0145		4.0	0.0	0.0	4.0	0.0	55.0	2.0	0.0	53.0	0.0
0146	3.0 1						0000010011				
0147	0011			0.0	0.0						
0151	2 1	276.0	36.0	32.0	144.0	64.0					
0152		14.0	2.0	4.0	8.0	0.0	14.0	2.0	4.0	8.0	0.0
0153		6.0	2.0	4.0	0.0	0.0	8.0	4.0	2.0	2.0	0.0
0154		8.0	2.0	2.0	4.0	0.0	58.0	2.0	0.0	40.0	16.0
0155							22.0	2.0	4.0	16.0	0.0
0156	2.0 1	1					0101110001				
0157	111	10.0	0.0	10.0							
0161	2 1	4.0	1.0	1.0	2.0	0.0	5.0	2.0	0.0	3.0	0.0
0162		2.0	1.0	1.0	0.0	0.0	2.0	1.0	1.0	0.0	0.0
0163		2.0	2.0	0.0	0.0	0.0	8.0	6.0	0.0	2.0	0.0
0164		3.0	1.0	0.0	2.0	0.0	4.0	1.0	0.0	3.0	0.0
0165		4.0	1.0	0.0	3.0	0.0	10.0	3.0	0.0	7.0	0.0
0166	3.0 1	11100000000100000					010101100011				
0167	0111	1.0	0.0	0.0							
0171	2 1	20.0	4.0	1.0	15.0	0.0	28.0	4.0	0.0	24.0	0.0
0172		4.0	4.0	0.0	0.0	0.0	20.0	2.0	0.0	18.0	0.0
0173		2.0	1.5	0.5	0.0	0.0	10.0	4.0	0.0	2.0	4.0
0174		8.0	2.0	0.0	6.0	0.0	2.0	0.0	0.0	2.0	0.0
0175		2.0	0.0	0.0	2.0	0.0	4.0	2.0	0.0	2.0	0.0
0176	4.0 2	11000100100000000					111111101				
0177	0011	0.0	0.0								
0181	5 1	2.0	0.5	0.5	1.0	0.0	4.0	1.0	0.0	3.0	0.0
0182		0.5	0.0	0.5	0.0	0.0	1.0	1.0	0.0	0.0	0.0
0183		0.5	0.0	0.5	0.0	0.0	6.0	2.5	0.5	3.0	0.0
0184		1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0185		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0186	1.0 2	1									
0187	0111	0.0	0.0	0.0							
0191	5 1	1.0	0.0	1.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
0192		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0193		1.0	0.0	1.0	0.0	0.0	4.0	0.0	3.0	1.0	0.0
0194		1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0195		4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
0196	1.0 2						0011				
0197	0111	20.0	95.0	40.0							
0201	5 1	16.0	3.00	1.00	12.0	0.0	4.0	1.0	3.0	1.0	0.0
0202		1.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0
0203		1.5	1.5	0.0	0.0	0.0					
0204		3.0	1.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
0205		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0206	5.0 1	000001					1111111				
0207	0111	10.0	0.0	0.0							

0211	5	1	16.0	2.0	2.0	12.0	0.0	4.0	1.0	0.0	3.0	0.0
0212			4.0	4.0	0.0	0.0	0.0	4.0	4.0	0.0	0.0	0.0
0213			4.0	4.0	0.0	0.0	0.0	6.0	3.0	0.0	3.0	0.0
0214			4.0	1.0	0.0	3.0	0.0	16.0	4.0	0.0	12.0	0.0
0215												
0216	5.0	1		100001				010111				
0217	0011			0.0	0.0							
0221	5	1	4.0	2.0	0.0	2.0	0.0	4.0	2.0	0.0	2.0	0.0
0222			2.0	1.0	1.0	0.0	0.0	10.0	1.0	1.0	8.0	0.0
0223			2.0	1.0	0.0	1.0	0.0	6.0	2.0	1.0	3.0	0.0
0224			5.0	0.5	0.0	4.5	0.0	1.0	0.0	0.0	1.0	0.0
0225			1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
0226	3.0	1		000001				1000001101				
0227	0111			5.0	0.0	0.0						
0231	5	1	3.0	1.0	1.0	1.0	0.0	5.0	2.5	0.5	2.0	0.0
0232			2.0	1.0	1.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
0233			1.0	0.0	1.0	0.0	0.0	4.0	1.0	1.0	2.0	0.0
0234			10.0	1.0	1.0	8.0	0.0					
0235								2.0	0.0	2.0	0.0	0.0
0236	4.0	1		1000010000000001				110001				
0237	0011			0.0	0.0							
0241	5	1	4.0	0.5	0.5	3.0	0.0	4.0	1.0	0.0	3.0	0.0
0242			1.0	1.0	0.0	0.0	0.0	2.0	1.0	0.0	1.0	0.0
0243			2.0	1.0	0.0	1.0	0.0	5.0	2.0	0.0	3.0	0.0
0244			4.0	1.0	0.0	3.0	0.0	96.0	0.0	0.0	96.0	0.0
0245			2.0	0.5	0.0	1.5	0.0	2.0	0.0	0.0	2.0	0.0
0246	4.0	1		100001				101111101101				
0247	01	1		22.0		0.0						
0251	5	1	4.0	1.25	0.0	2.75	0.0	7.5	4.0	0.0	3.5	0.0
0252			1.0	1.0	0.0	0.0	0.0	2.0	1.0	0.0	0.0	1.0
0253			1.0	1.0	0.0	0.0	0.0	9.0	4.5	0.0	4.5	0.0
0254			8.0	1.5	0.0	6.5	0.0	5.5	1.0	0.0	4.5	0.0
0255			5.5	1.0	0.0	4.5	0.0	1.0	1.0	0.0	0.0	0.0
0256	4.5	2		111001				0111110101				
0257	10116.0			0.0	0.0							
0261	5	1	2.5	1.0	0.5	1.0	0.0	27.0	1.0	0.0	26.0	0.00
0262			3.0	1.0	1.0	0.0	1.0	5.0	1.0	0.0	4.0	0.0
0263			1.5	1.0	0.5	0.0	0.0	12.5	8.0	0.0	4.0	0.5
0264			3.0	1.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
0265			0.0	0.0	0.0	0.0	0.0	3.0	1.0	0.0	2.0	0.0
0266	1.0	2		0000011				0100011001110001				
0267	111110.0			50.0	0.0	0.0						
0271	5	1	9.0	2.0	0.0	7.0	0.0	8.0	2.0	0.0	6.0	0.0
0272			4.0	4.0	0.0	0.0	0.0	3.0	2.0	0.0	1.0	0.0
0273			2.0	1.0	1.0	0.0	0.0	11.0	5.0	0.0	6.0	0.0
0274			6.0	2.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
0275			7.0	3.5	0.0	3.5	0.0	2.0	0.0	2.0	0.0	0.0
0276	4.0	3		100001				010010000011				
0277	0011			1.0	20.0							

0281	5	1	1.88	0.75	0.63	0.50	0.0	4.0	1.0	1.0	2.0	0.0
0282			2.0	0.5	1.0	0.5	0.0	4.0	1.0	0.0	3.0	0.0
0283			2.0	1.0	1.0	0.0	0.0	7.0	4.0	1.0	2.0	0.0
0284			3.0	1.0	0.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0
0285			2.0	1.0	0.0	1.0	0.0	2.0	1.0	1.0	0.0	0.0
0286	5.0	2		0000010001	00000000			11111111				
0287	0111		75.0	0.0	10.0							
0291	5	1	2.0	0.0	1.0	1.0	0.0	6.0	4.0	0.0	2.0	0.0
0292			1.0	0.5	0.5	0.0	0.0	5.0	1.0	0.0	4.0	0.0
0293			1.5	0.5	0.5	0.5	0.0	5.0	3.0	1.0	1.0	0.0
0294			7.0	1.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
0295			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0296	2.0	1		11				0101110101				
0297	1011	2.0		0.0	0.0							
0301	5	1	3.0	0.0	0.5	2.5	0.0	4.0	2.0	0.0	2.0	0.0
0302			1.0	1.0	0.0	0.0	0.0	3.0	1.0	0.0	2.0	0.0
0303			1.5	0.5	0.0	1.0	0.0	8.0	5.5	2.0	0.5	0.0
0304			1.0	1.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
0305			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0306	2.0	3		1100011				1000001				
0307	1011	1.5		7.3	25.0							
0311	7	1	4.0	1.0	1.0	2.0	0.0	4.0	2.0	0.0	2.0	0.0
0312			1.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0
0313			1.0	0.0	1.0	0.0	0.0	16.0	6.0	0.0	10.0	0.0
0314			75.0	3.0	0.0	72.0	0.0	2.0	0.0	0.0	2.0	0.0
0315			0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0
0316	7.0	3		111001				11010101001000001				
0317	1011	10.0		2.0	5.0							
0321	7	1	4.0	2.0	1.0	0.0	1.0	6.0	3.0	0.0	3.0	0.0
0322			1.0	0.5	0.5	0.0	0.0	1.0	0.0	1.0	0.0	0.0
0333			1.0	0.0	1.0	0.0	0.0	18.0	4.0	2.0	12.0	0.0
0334			4.0	4.0	0.0	0.0	0.0					
0335												
0336	2			000001000001				011001000001				
0327	1011	10.0		0.0	30.0							
0331	7	1	17.0	1.0	4.0	12.0	0.0	10.0	6.0	0.0	4.0	0.0
0332			4.5	2.0	0.5	2.0	0.0	8.0	0.0	2.0	6.0	0.0
0333			3.5	1.0	0.5	2.0	0.0	7.0	5.0	1.0	1.0	0.0
0334			22.0	2.0	0.0	20.0	0.0	28.0	6.0	2.0	20.0	0.0
0335			10.0	6.0	2.0	2.0	0.0					
0336	4.0	3		110001				00111010100000001				
0337	1011	10.0		0.0	0.0							
0341	7	1	16.0	4.0	2.0	8.0	2.0	7.0	3.0	0.0	4.0	0.0
0342			18.0	2.0	0.0	0.0	16.0	17.0	1.0	0.0	16.0	0.0
0343			1.0	1.0	0.0	0.0	0.0	11.0	3.0	2.0	6.0	0.0
0344			14.0	3.0	1.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0
0345								5.0	1.0	1.0	3.0	0.0
0346	6.0	3		110001101				111101001011				
0347	1011	30.0		0.0	20.0							

0351	7	1	12.0	0.0	1.0	11.0	0.0	8.0	2.0	2.0	4.0	0.0
0352			5.0	0.0	1.5	3.5	0.0	8.0	1.0	1.0	6.0	0.0
0353			5.0	1.0	0.0	4.0	0.0	12.0	2.0	0.0	10.0	0.0
0354			14.0	2.0	1.0	11.0	0.0	8.0	1.0	1.0	6.0	0.0
0355			5.0	0.0	1.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
0356	5.0	2		000001				000101001				
0357	1011	10.0		0.0	70.0							
0361	7	1	2.0	0.5	0.5	1.0	0.0	6.0	2.0	1.0	3.0	0.0
0362			2.0	0.5	1.5	0.0	0.0	1.0	0.0	1.0	0.0	0.0
0363			1.0	0.0	1.0	0.0	0.0	5.0	2.0	1.0	2.0	0.0
0364			1.5	0.0	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0
0365			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0366	3.0	1		100001				000001				
0367	1011	60.0		0.0	20.0							
0371	7	1	4.0	1.0	3.0	0.0	0.0	4.5	3.0	0.0	1.5	0.0
0372			3.0	2.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
0373			1.0	0.0	1.0	0.0	0.0	14.0	7.0	1.0	6.0	0.0
0374			8.0	2.0	0.0	6.0	0.0	7.0	1.0	0.0	6.0	0.0
0375			0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
0376	2.0	1		000001				11000100011				
0377	1011	80.0		4.0	10.0							
0381	7	1	20.0	5.0	5.0	10.0	0.0	4.0	1.5	0.0	2.5	0.0
0382			10.0	2.5	2.5	5.0	0.0	10.0	2.5	2.5	5.0	0.0
0383			10.0	2.5	2.5	5.0	0.0	12.0	2.5	2.5	7.0	0.0
0384			10.0	2.5	2.5	5.0	0.0	12.0	2.0	2.0	8.0	0.0
0385								30.0	2.5	2.5	25.0	0.0
0386	5.0	3		10100100000100000				11100110000100000				
0387	1011	60.0		1.0	30.0							
0391	7	1	4.0	0.0	1.0	3.0	0.0	8.0	0.0	0.0	8.0	0.0
0392			1.0	1.0	0.0	0.0	0.0	3.0	1.0	0.0	2.0	0.0
0393			3.0	1.0	0.0	2.0	0.0	8.0	4.0	0.0	4.0	0.0
0394			8.0	3.0	0.0	5.0	0.0	1.0	0.0	0.0	1.0	0.0
0395			1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
0396	3.0	1		10000100000100000				0000000000010000				
0397	1011	50.0		3.0	0.0							
0401	7	1	4.00	1.0	0.00	3.0	0.0	4.0	1.0	0.0	3.0	0.0
0402			12.0	2.0	2.0	8.0	0.0	2.0	2.0	0.0	0.0	0.0
0403			1.0	0.5	0.5	0.0	0.0	10.0	4.0	0.0	6.0	0.0
0404			16.0	4.0	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0
0405			0.0	0.0	0.0	0.0	0.0	16.0	2.0	2.0	12.0	0.0
0406	2.0	3		00000100000000000				01011101101000001				
0407	1111	10.0		15.0	0.0	20.0						
0411	7	1	8.0	2.0	2.0	4.0	0.0	7.0	2.0	1.0	4.0	0.0
0412			2.0	0.5	1.5	0.0	0.0	3.0	2.0	1.0	0.0	0.0
0413			3.0	1.0	2.0	0.0	0.0	11.0	2.0	1.0	8.0	0.0
0414			12.5	2.0	1.0	10.0	0.0	14.0	1.0	6.0	7.0	0.0
0415			9.0	1.5	6.0	1.5	0.0	3.0	1.0	2.0	0.0	0.0
0416	4.0	1		11000111100000000				11111110000000000				
0417	1011	0.0		0.0	0.0							

0421	7	1	10.0	2.0	0.0	8.0	0.0	6.0	4.0	0.0	2.0	0.0
0422			4.0	2.0	0.0	2.0	0.0	6.0	2.0	0.0	4.0	0.0
0423			5.0	3.0	0.0	2.0	0.0	12.0	5.0	0.0	7.0	0.0
0424			3.0	2.0	0.0	1.0	0.0	1.0	0.0	0.0	1.0	0.0
0425			2.0	0.0	0.0	2.0	0.0	4.0	1.0	0.0	3.0	0.0
0426	5.0	1		111100000000000001				11111100111000000				
0427	101136.0			2.0	5.0							
0431	7	1	4.0	1.0	1.0	2.0	0.0	7.0	2.0	0.0	5.0	0.0
0432			4.0	2.0	2.0	0.0	0.0	2.0	1.5	0.0	0.5	0.0
0433			2.0	2.0	0.0	0.0	0.0	10.0	4.0	0.0	6.0	0.0
0434			5.5	2.5	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
0435			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0436	5.0	2		110001				110101000001				
0437	101150.0			2.0	5.0							
0441	7	1	2.0	0.25	0.5	1.25	0.0	6.0	2.0	0.0	4.0	0.0
0442			0.5	0.5	0.0	0.0	0.0	1.5	1.0	0.0	0.5	0.0
0443			1.5	1.0	0.0	0.5	0.0	12.0	4.0	0.0	8.0	0.0
0444			4.0	1.0	0.0	3.0	0.0	10.0	0.0	0.0	10.0	0.0
0445			9.0	8.0	0.0	1.0	0.0	0.25	0.25	0.0	0.0	0.0
0446	5.0	3		100001				010101111001				
0447	101125.0			0.0	0.0							
0451	7	1	16.0	4.0	4.0	8.0	0.0	8.0	4.0	0.0	4.0	0.0
0452			2.0	1.0	1.0	0.0	0.0	8.0	0.0	0.0	8.0	0.0
0453			1.0	0.5	0.5	0.0	0.0	10.0	4.0	0.0	6.0	0.0
0454			14.0	2.0	0.0	12.0	0.0					
0455								0.0	0.0	0.0	0.0	0.0
0456	2.0	1		100001				00011				
0457	01			0.0								
0461	7	1	6.0	1.0	1.0	4.0	0.0	1.0	0.0	0.0	1.0	0.0
0462			3.0	2.0	0.0	1.0	0.0	4.0	2.0	1.0	1.0	0.0
0463			1.0	0.0	1.0	0.0	0.0	8.0	1.0	0.0	7.0	0.0
0464			4.0	1.0	1.0	2.0	0.0	0.5	0.0	0.0	0.5	0.0
0465			0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	8.0	0.0
0466	3.0	1		111111				10111100001				
0467	101110.0			98.0	0.0							
0471	7	1	2.0	0.5	0.5	1.0	0.0	5.0	1.0	0.0	4.0	0.0
0472			1.0	0.5	0.0	0.5	0.0	1.0	0.5	0.0	0.5	0.0
0473			0.5	0.5	0.0	0.0	0.0	6.0	2.0	0.0	4.0	0.0
0474			6.0	0.5	0.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0
0475			0.0	0.0	0.0	0.0	0.0	5.0	1.0	0.0	4.0	0.0
0476	3.0	1		1000001				1001001				
0477	111110.0			20.0	0.0	90.0						
0481	7	1	20.0	2.0	2.0	16.0	0.0	5.0	1.0	0.5	3.5	0.0
0482			5.0	0.5	0.5	4.0	0.0	24.0	2.0	2.0	20.0	0.0
0483			2.0	1.0	1.0	0.0	0.0	10.0	3.0	1.0	6.0	0.0
0484			4.0	2.0	2.0	0.0	0.0	40.0	1.0	1.0	38.0	0.0
0485			16.0	1.0	1.0	14.0	0.0	1.0	0.5	0.5	0.0	0.0
0486	4.0	1		00110101				11111111				
0487	10115.0			1.0	3.0							

0491	7 1	16.0	4.0	4.0	8.0	0.0	32.0	4.0	0.0	28.0	0.00
0492		12.0	3.0	1.0	8.0	0.0	30.0	2.0	1.0	27.0	0.0
0493		4.0	2.0	2.0	0.0	0.0	10.0	4.0	2.0	4.0	0.0
0494		22.0	4.0	2.0	16.0	0.0	20.0	0.0	0.0	20.0	0.0
0495		2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
0496	3.0 1		000001				000100001111				
0497	1011	20.0		4.0	25.0						
0501	8 1	48.0	4.0	4.0	40.0	0.0	8.0	4.0	0.0	4.0	0.0
0502		16.0	4.0	4.0	8.0	0.0	8.0	4.0	0.0	4.0	0.0
0503		16.0	4.0	4.0	8.0	0.0	24.0	4.0	2.0	18.0	0.0
0504		16.0	4.0	4.0	8.0	0.0	48.0	4.0	0.0	44.0	0.0
0505		16.0	4.0	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0
0506	2.0 1		011001				0001101				
0507	0111		20.0	5.0	10.0						
0511	8 1	4.0	0.5	0.5	3.0	0.0	4.0	2.0	0.0	2.0	0.0
0512		3.0	2.0	0.0	1.0	0.0	2.0	1.0	0.0	1.0	0.0
0513		2.0	1.0	0.5	0.5	0.0	2.0	1.0	0.0	1.0	0.0
0514		2.0	0.5	0.0	1.5	0.0	8.0	0.0	0.0	8.0	0.0
0515		0.0	0.0	0.0	0.0	0.0					
0516	3.0 2		110001				000010011011				
0517	0011			1.0	0.0						
0521	8 1						8.0	4.0	0.0	4.0	0.0
0522		1.0	0.0	1.0	0.0	0.0	2.0	0.0	1.0	1.0	0.0
0523		1.0	0.0	1.0	0.0	0.0	10.0	3.0	1.0	6.0	0.0
0524		5.0	2.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
0525		1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
0526	6.0 1		101				0111011				
0527	0111		5.0	10.0	10.0						
0531	8 1	7.0	1.0	1.0	5.0	0.0	6.0	3.0	1.0	2.0	0.0
0532		1.0	0.0	0.5	0.5	0.0	1.0	0.5	0.0	0.5	0.0
0533		2.0	0.0	1.0	1.0	0.0	15.0	2.0	1.0	12.0	0.0
0534		1.0	0.0	0.0	1.0	0.0	0.5	0.0	0.0	0.0	0.5
0535		0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
0536	3.0 1		0000001				011110100011				
0537	0111		20.0	2.0	10.0						
0541	8 1	15.0	2.0	0.0	13.0	0.0	6.0	4.0	0.0	2.0	0.0
0542		2.0	2.0	0.0	0.0	0.0	6.0	1.0	0.0	5.0	0.0
0543		5.0	4.0	0.0	1.0	0.0	8.0	5.0	0.0	3.0	0.0
0544		4.0	1.0	0.0	3.0	0.0	12.0	0.0	0.0	12.0	0.0
0545		4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
0546	3.0 1		1000001				00011				
0547	0011			0.0	0.0						
0551	8 1	8.0	2.0	2.0	4.0	0.0	4.0	1.0	0.0	3.0	0.0
0552		1.0	1.0	0.0	0.0	0.0	4.0	2.0	2.0	0.0	0.0
0553		1.0	1.0	0.0	0.0	0.0	10.0	4.0	0.0	6.0	0.0
0554		6.0	2.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
0555		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0556	5.0 2						00110100001				
0557	0111		0.0	2.0	0.0						

0561	8 1	12.0	2.0	0.0	10.0	0.0	9.0	4.5	0.0	4.5	0.0
0562		2.0	2.0	0.0	0.0	0.0	20.0	3.0	0.0	17.0	0.0
0563		2.0	1.0	0.0	1.0	0.0	8.0	3.0	0.0	5.0	0.0
0564		4.0	2.0	0.0	2.0	0.0	8.0	0.0	0.0	8.0	0.0
0565		1.0	0.0	0.0	1.0	0.0	8.0	0.0	0.0	8.0	0.0
0566	3.0 1		0000001				000100100111				
0567	0111		0.0	0.0	80.0						
0571	8 1	30.0	8.0	0.0	22.0	0.0	10.0	1.0	0.0	9.0	0.0
0572		14.0	3.0	1.0	10.0	0.0	5.0	3.0	0.0	2.0	0.0
0573		13.0	2.0	1.0	10.0	0.0	22.0	6.0	0.0	16.0	0.0
0574		14.0	2.0	0.0	12.0	0.0	12.0	3.0	0.0	9.0	0.0
0575		2.5	1.5	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
0576	13.01	1					01111110000100001				
0577	0011		4.0	0.0							
0581	8 1	10.0	0.0	2.0	8.0	0.0	6.0	0.0	0.0	6.0	0.0
0582		3.0	0.0	1.0	2.0	0.0	10.0	0.0	0.0	10.0	0.0
0583		7.0	0.0	5.0	2.0	0.0	4.0	0.0	0.0	4.0	0.0
0584		6.0	0.0	3.0	3.0	0.0	6.0	0.0	3.0	3.0	0.0
0585		2.0	0.0	1.0	1.0	0.0	5.0	0.0	1.0	4.0	0.0
0586	2.0 1		11000110000010101				10111011				
0587	0011		0.0	0.0							
0591	8 1	1.0	0.0	0.33	0.67	0.0	4.0	1.0	0.0	3.0	0.0
0592		0.67	0.0	0.67	0.0	0.0	1.0	1.0	0.0	0.0	0.0
0593		0.67	0.0	0.67	0.0	0.0	6.0	4.0	0.0	2.0	0.0
0594		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0595		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0596	4.0 1		000001				000101				
0597	0111		0.0	2.0	35.0						
0601	8 1	5.0	1.0	0.0	4.0	0.0	3.0	1.5	0.0	1.5	0.0
0602		2.5	1.0	0.5	1.0	0.0	4.0	1.0	0.0	3.0	0.0
0603		4.0	1.0	1.0	2.0	0.0	44.0	2.0	2.0	40.0	0.0
0604		7.0	2.0	0.0	5.0	0.0					
0605		2.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
0606	12.01		1010001				0101110111111111				
0607	0111		15.0	3.0	0.0						
0611	8 1	11.0	3.0	0.0	8.0	0.0	45.0	5.0	0.0	40.0	0.0
0612		4.0	3.0	1.0	0.0	0.0	25.0	1.0	0.0	24.0	0.0
0613		14.0	2.0	0.0	12.0	0.0	26.0	6.0	0.0	20.0	0.0
0614		40.0	8.0	0.0	32.0	0.0	2.0	1.0	0.0	1.0	0.0
0615		2.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
0616	18.01		0100001				010001101011				
0617	0111		20.0	1.0	50.0						
0621	8 1	15.0	2.0	1.0	12.0	0.0	17.0	2.0	1.0	14.0	0.0
0622		15.0	2.0	1.0	12.0	0.0	14.0	2.0	0.0	12.0	0.0
0623		14.0	2.0	0.0	12.0	0.0	20.0	3.0	1.0	15.0	1.0
0624		150.0	5.0	5.0	140.0	0.0	8.0	0.0	1.0	6.0	1.0
0625		4.0	0.0	1.0	2.0	1.0					
0626	10.01		111001100100				1101100001				
0627	0111		90.0	98.0	80.0						

0631	8	1	3.0	1.0	0.5	1.5	0.0	8.0	4.0	0.0	4.0	0.0
0632			0.25	0.25	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0
0633			0.4	0.0	0.4	0.0	0.0	6.0	4.0	0.0	2.0	0.0
0634			4.0	1.0	0.0	3.0	0.0	0.5	0.0	0.0	0.5	0.0
0635			0.0	0.0	0.0	0.0	0.0	2.0	0.5	0.0	1.5	0.0
0636	2.0	1		100001				0111101				
0637	0111		0.0	95.0	35.0							
0641	8	1	6.0	1.0	1.5	3.5	0.0	7.0	3.0	0.0	4.0	0.0
0642			2.0	0.5	1.0	0.5	0.0	2.0	0.5	0.5	1.0	0.0
0643			3.0	0.5	0.5	2.0	0.0	10.0	4.0	2.0	4.0	0.0
0644			8.0	3.0	1.0	4.0	0.0	8.0	1.0	1.0	6.0	0.0
0645			3.0	1.0	1.0	1.0	0.0					
0646	2.0	1		0000001				11111100110100001				
0647	0011			3.0	5.0							
0651	8	1	10.0	4.0	4.0	2.0	0.0	8.0	4.0	0.0	4.0	0.0
0652			3.0	2.0	0.0	1.0	0.0	3.0	2.0	0.0	1.0	0.0
0653			4.0	2.0	0.0	2.0	0.0	4.0	2.0	2.0	0.0	0.0
0654			10.0	2.0	0.0	8.0	0.0	2.0	1.0	0.0	1.0	0.0
0655			1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0656	2.0	1		1				111001100001				
0657	0011			1.0	25.0							
0661	1	1	1.0	0.0	1.0	0.0	0.0	6.0	1.0	1.0	4.0	0.0
0662			1.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0
0663			1.0	0.0	1.0	0.0	0.0	4.0	2.0	1.0	1.0	0.0
0664			8.0	4.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
0665			0.0	0.0	0.0	0.0	0.0	8.0	1.0	1.0	6.0	0.0
0666	8.0	3		1010000001				000111				
0667	10119.0			10.0	30.0							
0671	1	1	2.0	0.0	2.0	0.0	0.0	7.0	4.0	0.0	3.0	0.0
0672			4.0	2.0	2.0	0.0	0.0	24.0	8.0	8.0	8.0	0.0
0673			10.0	2.0	2.0	6.0	0.0	20.0	2.0	4.0	14.0	0.0
0674			64.0	24.0	8.0	32.0	0.0	0.0	0.0	0.0	0.0	0.0
0675			40.0	8.0	0.0	32.0	0.0	10.0	1.0	1.0	8.0	0.0
0676	58.03			010100000101				1101000001				
0677	11110.0		25.0	0.0	40.0							
0681	6	1	1.0	0.0	1.0	0.0	0.0					
0682			3.0	3.0	0.0	0.0	0.0	20.0	7.0	0.0	13.0	0.0
0683			3.0	3.0	0.0	0.0	0.0	12.0	4.0	0.0	8.0	0.0
0684			50.0	20.0	0.0	30.0	0.0	16.0	0.0	0.0	16.0	0.0
0685			6.0	0.0	0.0	6.0	0.0	6.0	0.0	0.0	6.0	0.0
0686	5.0	2		11100010000000001				11011110000000001				
0687	101170.0			15.0	10.0							
0691	6	1	8.0	2.0	2.0	4.0	0.0	4.0	1.0	0.0	3.0	0.0
0692			6.0	1.0	1.0	4.0	0.0	8.0	2.0	1.0	5.0	0.0
0693			4.0	3.0	1.0	0.0	0.0	16.0	12.0	2.0	2.0	0.0
0694			4.0	3.0	0.0	1.0	0.0	1.0	0.0	0.0	1.0	0.0
0695			1.0	0.0	0.0	1.0	0.0	12.0	2.0	2.0	8.0	0.0
0696	5.0	2		0000011				01111				
0697	1111100.0100.098.0		85.0									



0701	6	1	14.0	1.0	1.0	12.0	0.0	8.0	2.0	2.0	4.0	0.0
0702			6.0	2.0	2.0	2.0	0.0	4.0	1.0	1.0	2.0	0.0
0703			4.0	1.0	1.0	2.0	0.0	20.0	4.0	4.0	12.0	0.0
0704			12.0	3.0	3.0	6.0	0.0					
0705			4.0	1.0	1.0	2.0	0.0	2.0	1.0	1.0	0.0	0.0
0706	3.0	2			1000001			001111				
0707	1011		40.0		1.0	10.0						
0711	9	1	4.0	0.0	1.0	3.0	0.0	4.0	1.0	0.0	3.0	0.0
0712			6.0	5.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0
0713			1.5	0.5	1.0	0.0	0.0	8.0	3.0	1.0	4.0	0.0
0714			24.0	10.0	2.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0
0715			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0716	4.0	1			00000000010			00010100010000001				
0717	0011				1.0	2.0						
0721	4	1	2.33	0.58	0.58	1.17	0.0	6.0	2.0	0.0	4.0	0.0
0722			5.0	1.0	0.0	4.0	0.0	21.0	1.0	0.0	20.0	0.0
0723			2.83	0.5	0.5	1.83	0.0	4.96	1.63	0.0	3.33	0.0
0724			4.0	1.0	0.0	3.0	0.0	1.0	0.33	0.0	0.67	0.0
0725			4.17	1.67	0.0	2.5	0.0	10.0	2.0	0.0	8.0	0.0
0726	3.0	2			101000011011000100			11111101101111011				
0727	1111		0.0	0.0	0.0	0.0						
0731	9	1	12.0	2.0	2.0	8.0	0.0	8.0	2.0	0.0	6.0	0.0
0732			2.0	0.0	1.0	1.0	0.0	2.0	1.0	0.0	1.0	0.0
0733			1.0	0.0	1.0	0.0	0.0	11.0	2.0	2.0	7.0	0.0
0734			10.0	1.0	0.0	9.0	0.0	6.0	1.0	0.0	5.0	0.0
0735			2.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0
0736	3.0	1			100100000100			1011000001				
0737	0111				10.0	20.0	10.0					
0741	8	1	8.0	1.0	1.0	6.0	0.0	8.0	2.0	2.0	4.0	0.0
0742			2.0	1.0	0.0	1.0	0.0	2.0	1.0	0.0	1.0	0.0
0743			2.0	0.0	0.0	0.0	0.0	4.0	3.0	0.0	1.0	0.0
0744			4.0	3.0	0.0	1.0	0.0	72.0	8.0	3.0	61.0	0.0
0745			11.0	8.0	3.0	0.0	0.0	256.036.0	0.0	0.0	220.00.0	
0746	36.01				1111111							
0747	0111				0.0	0.0	0.0					
0751	7	1	2.0	1.0	0.0	1.0	0.0	8.0	4.0	0.0	4.0	0.0
0752			1.21	1.21	0.0	0.0	0.0	1.0	0.64	0.0	0.36	0.0
0753			1.0	1.0	0.0	0.0	0.0	4.0	2.0	0.0	2.0	0.0
0754			2.0	0.71	0.36	0.93	0.0	1.0	0.0	0.0	1.0	0.0
0755			0.64	0.0	0.0	0.64	0.0	0.0	0.0	0.0	0.0	0.0
0756	3.0	1			100010000010			111111000001				
0757	1111		30.0	0.0	0.0	0.0						
0761	7	1	4.0	1.0	1.0	2.0	0.0	4.0	2.0	0.0	2.0	0.0
0762			2.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
0763			1.0	0.0	1.0	0.0	0.0	8.0	4.0	1.0	3.0	0.0
0764			24.0	2.0	2.0	18.0	0.0	4.0	2.0	1.0	1.0	0.0
0765			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0766	3.0	1			100001			010101				
0767	1111		50.0	0.0	0.0	0.0						

0771	7	1	4.0	2.0	0.0	2.0	0.0	7.0	3.0	0.0	4.0	0.0
0772			4.0	2.0	0.0	2.0	0.0	4.0	1.0	0.0	3.0	0.0
0773			3.0	3.0	0.0	0.0	0.0	20.0	8.0	0.0	12.0	0.0
0774			16.0	3.0	0.0	13.0	0.00	0.0	0.0	30.0	0.0	0.0
0775			9.0	0.0	0.0	9.0	0.0	1.0	1.0	0.0	0.0	0.0
0776	4.0	1		0100011				010000001				
0777	1011	10.0		2.0	5.0							
0781	9	1	10.0	4.0	4.0	2.0	0.0	4.0	2.0	0.0	2.0	0.0
0782			4.0	2.0	0.0	2.0	0.0	8.0	0.0	0.0	8.0	0.0
0783			1.0	0.0	1.0	0.0	0.0	6.0	2.0	2.0	2.0	0.0
0784			18.0	2.0	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0
0785			0.0	0.0	0.0	0.0	0.0	4.0	1.0	0.0	3.0	0.0
0786	2.0	1		1				010111011				
0787		11			0.0	0.0						
0791	7	1	6.0	2.0	0.0	4.0	0.0	6.0	3.0	0.0	3.0	0.0
0792			10.0	5.0	0.0	5.0	0.0	2.0	2.0	0.0	0.0	0.0
0793			2.0	2.0	0.0	0.0	0.0	8.0	3.0	0.0	5.0	0.0
0794			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0795			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0796	3.0	3		1111010				111101				
0797		11			1.0	20.0						

# USAFE Data

0011	2 1	10.0	1.0	0.0	9.0	0.0	4.0	2.5	0.0	1.5	0.0
0012		0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
0013		0.0	0.0	0.0	0.0	0.0	2.0	1.0	1.0	0.0	0.0
0014		0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
0015		0.0	0.0	0.0	0.0	0.0					
0016	80.03		11	0.0	0.0						
0017	1	10.0	1.0	0.0	9.0	0.0	1.0	0.0	0.0	1.0	0.0
0021	1 1	1.0	0.0	1.0	0.0	0.0	6.0	3.0	0.0	3.0	0.0
0022		1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0023		0.5	0.0	0.5	0.0	0.0	6.0	3.0	1.0	2.0	0.0
0024		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0025		0.0	0.0	0.0	0.0	0.0					
0026	17.03		11	8.0	7.0						
0027	2										
0031	2 1	96.0	12.0	1.0	83.0	0.0	6.0	2.0	0.5	3.5	0.0
0032		6.0	4.0	0.0	2.0	0.0	12.0	6.0	0.0	6.0	0.0
0033		43.0	30.0	1.0	12.0	0.0	20.0	2.0	2.0	16.0	0.0
0034		12.0	8.0	1.0	3.0	0.0	12.0	0.0	0.0	12.0	0.0
0035		24.0	16.0	0.0	8.0	0.0					
0036	95.03		11	18.0	12.0						
0037	1										
0041	2 2										
0042											
0043											
0044											
0045											
0046			10	5.0							
0047	1	60.0	10.0	0.0	40.0	10.0	50.0	0.0	0.0	50.0	0.0
0051	1 2										
0052											
0053											
0054											
0055											
0056			00								
0057	1	40.0	0.5	0.5	39.0	0.0	40.0	0.5	0.5	39.0	0.0
0061	2 1	2.0	1.0	1.0	0.0	0.0	8.0	4.0	0.0	4.0	0.0
0062		1.5	1.0	0.5	0.0	0.0	2.0	1.0	1.0	0.0	0.0
0063		1.0	0.0	1.0	0.0	0.0	42.0	3.0	3.0	36.0	0.0
0064		1.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
0065		16.0	0.0	0.0	16.0	0.0					
0066	30.03		11	4.0	3.0						
0067	1	30.0	1.0	1.0	28.0	0.0	30.0	0.0	0.0	30.0	0.0

Appendix K: Key for Relating Numerical Data File to Questionnaire Responses

CONUS, AAC, and PACAF Key

The first three columns on each line represent the case ie 001 means case number 1. The cases range from 001 to 079. The fourth column on each line represents the line number for a particular case. The line numbers range from 1 to 7.

Line Number	Data file Column Numbers	Description	Question Number on Questionnaire	Values and Responses
1	6	Command	1	1 = AAC    6 = PACAF 2 = AFLC    7 = SAC 3 = AFSC    8 = TAC 4 = ATC    9 = Other 5 = MAC
1	8	Prime BEEF Team	2	1 = yes    2 = no
1	10-14	RRR - Total	3a	Hours or Blank=missing
1	15-19	RRR lect/demo	3b1	Hours or Blank=missing
1	20-24	RRR film	3b2	Hours or Blank=missing
1	25-29	RRR hands-on	3b3	Hours or Blank=missing
1	30-34	RRR other	3b4	Hours or Blank=missing
1	35-39	Weapon - Total	4a	Hours or Blank=missing
1	40-44	Weapon lect/demo	4b1	Hours or Blank=missing
1	45-49	Weapon film	4b2	Hours or Blank=missing
1	50-54	Weapon hands-on	4b3	Hours or Blank=missing
1	55-59	Weapon other	4b4	Hours or Blank=missing
2	10-14	Sanitation - Total	5a	Hours or Blank=missing
2	15-19	Sanitat. lect/demo	3b1	Hours or Blank=missing
2	20-24	Sanitat. film	5b2	Hours or Blank=missing
2	25-29	Sanitat. hands-on	5b3	Hours or Blank=missing
2	30-34	Sanitat. other	5b4	Hours or Blank=unknown

Line Number	Data file Column Numbers	Description	Question Number on Questionnaire	Values and Responses
2	35-39	Exp. Repair - Total	6a	Hours or Blank=missing
2	40-44	Repair lect/demo	6b1	Hours or Blank=missing
2	45-49	Repair film	6b2	Hours or Blank=missing
2	50-54	Repair hands-on	6b3	Hours or Blank=missing
2	55-59	Repair other	6b4	Hours or Blank=missing
3	10-14	EOR - Total	7a	Hours or Blank=missing
3	15-19	EOR lect/demo	7b1	Hours or Blank=missing
3	20-24	EOR film	7b2	Hours or Blank=missing
3	25-29	EOR hands-on	7b3	Hours or Blank=missing
3	30-34	EOR other	7b4	Hours or Blank=missing
3	35-39	Chemical - Total	8a	Hours or Blank=missing
3	40-44	Chemical lect/demo	8b1	Hours or Blank=missing
3	45-49	Chemical film	8b2	Hours or Blank=missing
3	50-54	Chemical hands-on	8b3	Hours or Blank=missing
3	55-59	Chemical other	8b4	Hours or Blank=missing
4	10-14	Security - Total	9a	Hours or Blank=missing
4	15-19	Security lect/demo	9b1	Hours or Blank=missing
4	20-24	Security film	9b2	Hours or Blank=missing
4	25-29	Security hands-on	9b3	Hours or Blank=missing
4	30-34	Security other	9b4	Hours or Blank=missing
4	35-39	Vehicle Equip - Tot	10a	Hours or Blank=missing
4	40-44	Vehicle Eq lect/dem	10b1	Hours or Blank=missing
4	45-49	Vehicle Eq film	10b2	Hours or Blank=missing
4	50-54	Vehicle Eq hands-on	10b3	Hours or Blank=missing
4	55-59	Vehicle Eq other	10b4	Hours or Blank=missing
5	10-14	Vehicle nonEq.-Tot	10c	Hours or Blank=missing
5	15-19	Vehicle NE lect/dem	10d1	Hours or Blank=missing
5	20-24	Vehicle NE film	10d2	Hours or Blank=missing
5	25-29	Vehicle NE hands-on	10d3	Hours or Blank=missing
5	30-34	Vehicle NE other	10d4	Hours or Blank=missing

Line Number	Data file Column Numbers	Description	Question Number on Questionnaire	Values and Responses
5	35-39	WRM - Total	11a	Hours or Blank=missing
5	40-44	WRM lect/ demo	11b1	Hours or Blank=missing
5	45-49	WRM film	11b2	Hours or Blank=missing
5	50-54	WRM hands-on	11b3	Hours or Blank=missing
5	55-59	WRM other	11b4	Hours or Blank=missing
6	6-9	Time on bivouac	12a	Days or Blank=missing
6	10	Biv. on or off base	12b	1 = on      2 = off 3 = on and off base
6	15-31	Participate in biv	12c1 to 12c17	1 = yes 0 = no
6	35-51	Support bivouac	12c18 to 12c34	1 = yes 0 = no
7	6	Have CSS	13a1	1 = yes      0 = no Blank = missing data
7	7	Have HSTS	13a2	1 = yes      0 = no Blank = missing data
7	8	Have CF-2 team kit	13a3	1 = yes      0 = no Blank = missing data
7	9	Have RRR mini-kit	13a4	1 = yes      0 = no Blank = missing data
7	10-14	CSS missing	13b	Percent or Blank = missing data
7	15-19	HSTS missing	13c	Percent or Blank = missing data
7	20-24	CF-2 team kit miss.	13d	Percent or Blank = missing data
7	25-29	RRR mini-kit miss.	13e	Percent or Blank= missing data

### Key to USAFE Data

The first three columns on each line represent the case ie 001 means case number 1. The cases range from 001 to 079. The fourth column on each line represents the line number for a particular case. The line numbers range from 1 to 7.

Line Number	Data file Column Numbers	Description	Question Number on Questionnaire	Values and Responses
1	6	Command	1	1 = 16th Air Force 2 = 17th Air Force 3 = other
1	8	Mobile Team	2	1 = yes    2 = no
1	10-14	RRR - Total	3a	Hours or Blank=missing
1	15-19	RRR lect/demo	3b1	Hours or Blank=missing
1	20-24	RRR film	3b2	Hours or Blank=missing
1	25-29	RRR hands-on	3b3	Hours or Blank=missing
1	30-34	RRR other	3b4	Hours or Blank=missing
1	35-39	Weapon - Total	4a	Hours or Blank=missing
1	40-44	Weapon lect/demo	4b1	Hours or Blank=missing
1	45-49	Weapon film	4b2	Hours or Blank=missing
1	50-54	Weapon hands-on	4b3	Hours or Blank=missing
1	55-59	Weapon other	4b4	Hours or Blank=missing
2	10-14	Sanitation - Total	5a	Hours or Blank=missing
2	15-19	Sanitat. lect/demo	5b1	Hours or Blank=missing
2	20-24	Sanitat. film	5b2	Hours or Blank=missing
2	25-29	Sanitat. hands-on	5b3	Hours or Blank=missing
2	30-34	Sanitat. other	5b4	Hours or Blank=unknown
2	35-39	Exp. Repair - Total	6a	Hours or Blank=missing
2	40-44	Repair lect/demo	6b1	Hours or Blank=missing
2	45-49	Repair film	6b2	Hours or Blank=missing
2	50-54	Repair hands-on	6b3	Hours or Blank=missing
2	55-59	Repair other	6b4	Hours or Blank=missing

Line Number	Data file Column Numbers	Description	Question Number on Questionnaire	Values and Responses
3	10-14	EOR - Total	7a	Hours or Blank=missing
3	15-19	EOR lect/demo	7b1	Hours or Blank=missing
3	20-24	EOR film	7b2	Hours or Blank=missing
3	25-29	EOR hands-on	7b3	Hours or Blank=missing
3	30-34	EOR other	7b4	Hours or Blank=missing
3	35-39	Chemical - Total	8a	Hours or Blank=missing
3	40-44	Chemical lect/demo	8b1	Hours or Blank=missing
3	45-49	Chemical film	8b2	Hours or Blank=missing
3	50-54	Chemical hands-on	8b3	Hours or Blank=missing
3	55-59	Chemical other	8b4	Hours or Blank=missing
4	10-14	Security - Total	9a	Hours or Blank=missing
4	15-19	Security lect/demo	9b1	Hours or Blank=missing
4	20-24	Security film	9b2	Hours or Blank=missing
4	25-29	Security hands-on	9b3	Hours or Blank=missing
4	30-34	Security other	9b4	Hours or Blank=missing
4	35-39	Vehicle NonEq - Tot	10a	Hours or Blank=missing
4	40-44	Vehicle NE lect/dem	10b1	Hours or Blank=missing
4	45-49	Vehicle NE film	10b2	Hours or Blank=missing
4	50-54	Vehicle NE hands-on	10b3	Hours or Blank=missing
4	55-59	Vehicle NE other	10b4	Hours or Blank=missing
5	10-14	WRM - Total	11a	Hours or Blank=missing
5	15-19	WRM lect/ demo	11b1	Hours or Blank=missing
5	20-24	WRM film	11b2	Hours or Blank=missing
5	25-29	WRM hands-on	11b3	Hours or Blank=missing
5	30-34	WRM other	11b4	Hours or Blank=missing
6	6-9	Time on bivouac	12a	Days or Blank=missing
6	10	Biv. at Ramstein or during exercise	12b	1 = Ramstein 2 = Exercise



Line Number	Data file Column Numbers	Description	Question Number on Questionnaire	Values and Responses
6	15	Have CSS	13a1	1 = yes    0 = no Blank = missing data
6	16	Have CF-2 team kit	13a2	1 = yes    0 = no Blank = missing data
6	20-24	CSS missing	13b	Percent or Blank = missing data
6	25-29	CF-2 team kit miss.	13c	Percent or Blank = missing data
7	6	RRR team	14	1 = yes    2 = no
7	10-14	RRR - Total	15a	Hours or Blank=missing
7	15-19	RRR lect/demo	15b1	Hours or Blank=missing
7	20-24	RRR film	15b2	Hours or Blank=missing
7	25-29	RRR hands-on	15b3	Hours or Blank=missing
7	30-34	RRR other	15b4	Hours or Blank=missing
7	35-39	Vehicle Equip.-Tot	16a	Hours or Blank=missing
7	40-44	Vehicle Eq lect/dem	16b1	Hours or Blank=missing
7	45-49	Vehicle Eq film	16b2	Hours or Blank=missing
7	50-54	Vehicle Eq hands-on	16b3	Hours or Blank=missing
7	55-59	Vehicle Eq other	16b4	Hours or Blank=missing

## Appendix L: Descriptive Statistics of CONUS Major Commands

This appendix contains the descriptive statistics for the following CONUS major commands:

1. Air Force Logistics Command (AFLC)
2. Air Force Systems Command (AFSC)
3. Air Training Command (ATC)
4. Military Airlift Command (MAC)
5. Tactical Air Command (TAC)
6. Strategic Air Command (SAC)
7. Other Commands With Only One Base  
(Space Command, Air University, USAF Academy)

Each command is briefly introduced and variables which contained outlier values are identified. For a complete explanation of survey questions refer to Chapters III and IV.

### Air Force Logistics Command

This section presents the descriptive statistics for AFLC. Population statistics will be presented first, followed by statistics of Home Station training, and Prime BEEF team equipment statistics. AFLC's data did not contain any outlier values.

Table L-1

AFLC Population Data

(Population = 5)	Survey	Number
	Question Number	
Bases which responded	1	5
Respondents which have CF or PB 1, 2, or 3 teams	2	5

AFLC survey return rate = 100.0%

Table L-2

## RRR Training Times for AFLC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	3a	5	73.00	115.00	276.00	4.00
Lecture/Demonst.	3b1	5	9.20	15.02	36.00	1.00
Films	3b2	5	7.10	13.92	32.00	0.50
Hands-on	3b3	5	43.70	58.76	144.00	2.00
Other	3b4	5	13.00	28.51	64.00	0.00

Other = using a model and weekly team competition

Table L-3

## Weapons Training Times - AFLC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	4a	4	16.75	14.17	30.00	4.00
Lecture/Demonst.	3b1	4	3.00	1.83	5.00	1.00
Films	3b2	4	0.25	0.50	1.00	0.00
Hands-on	3b3	4	13.50	12.12	24.00	3.00
Other	3b4	4	0.00	0.00	0.00	0.00

Table L-4

## Military Sanitation Training Times - AFLC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	5a	5	8.00	5.10	14.00	2.00
Lecture/Demonst.	5b1	5	2.30	1.20	4.00	1.00
Films	5b2	5	1.40	1.52	4.00	0.00
Hands-on	5b3	5	4.30	4.06	8.00	0.00
Other	5b4	5	0.00	0.00	0.00	0.00

Table L-5

## Expedient Repair Training Times - AFLC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	6a	5	23.60	24.63	66.00	2.00
Lecture/Demonst.	6b1	5	2.20	1.09	4.00	1.00
Films	6b2	5	1.00	1.73	4.00	0.00
Hands-on	6b3	5	20.40	25.23	64.00	0.00
Other	6b4	5	0.00	0.00	0.00	0.00

Table L-6

## Explosive Ordnance Reconnaissance Training Times - AFLC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	7a	5	12.50	22.15	52.00	0.50
Lecture/Demonst.	7b1	5	1.60	0.65	2.00	0.50
Films	7b2	5	1.10	1.67	4.00	0.00
Hands-on	7b3	5	9.60	21.47	48.00	0.00
Other	7b4	5	0.20	0.45	1.00	0.00
Other = using a model						

Table L-7

## Chemical Warfare Training Times - AFLC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	8a	5	18.70	23.11	60.00	2.00
Lecture/Demonst.	8b1	5	4.40	1.67	6.00	2.00
Film	8b2	5	0.90	0.89	2.00	0.00
Hands-on	8b3	5	12.60	22.60	53.00	2.00
Other	8b4	5	0.80	1.79	4.00	0.00
Other = proficiency training in field						

Table L-8

## Personal, Convoy, and Work Party Training Times - AFLC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	9a	5	16.40	25.09	61.00	2.00
Lecture/Demonst.	9b1	5	1.80	1.48	4.00	0.00
Film	9b2	5	0.60	0.89	2.00	0.00
Hands-on	9b3	5	13.80	23.67	56.00	1.00
Other	9b4	5	0.20	0.45	1.00	0.00

Other = locally prepared slides

Table L-9

## Vehicle Training Times for Equipment Operators - AFLC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10a	5	14.40	24.55	58.00	0.00
Lecture/Demonst.	10b1	5	0.60	0.89	2.00	0.00
Film	10b2	5	0.00	0.00	0.00	0.00
Hands-on	10b3	5	10.60	16.70	40.00	0.00
Other	10b4	5	3.20	16.70	40.00	0.00

Other = base drivers training

Table L-10

## Vehicle Training Times for Nonequipment Operators - AFLC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10c	3	3.33	1.15	4.00	2.00
Lecture/Demonst.	10d1	3	0.33	0.58	1.00	0.00
Film	10d2	3	0.00	0.00	0.00	0.00
Hands-on	10d3	3	3.00	1.00	4.00	2.00
Other	10d4	3	0.00	0.00	0.00	0.00

Table L-11

## WRM Field Equipment Training Times - AFLC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	11a	5	19.40	21.09	55.00	4.00
Lecture/Demonst.	11b1	5	2.00	0.71	3.00	1.00
Film	11b2	5	0.90	1.75	4.00	0.00
Hands-on	11b3	5	16.40	21.15	53.00	2.00
Other	11b4	5	0.10	0.22	0.50	0.00

Other = briefing oriented to AFM 86-3, volume I

Table L-12

## Summation of Training Times - AFLC

Training Times (hours)	N	Mean	Standard Deviation	Maximum	Minimum
Summation Total	5	187.00	169.59	393.00	40.00
Summation Lecture/Demon.	5	26.10	14.52	50.12	12.00
Summation Film	5	13.20	21.75	52.00	1.50
Summation Hands-on	5	133.40	140.49	358.00	19.00
Summation Other	5	14.30	27.82	64.00	0.00

Table L-13

## Days Spent on Bivouac - AFLC

	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Days on Bivouac	12a	5	3.20	0.84	4.00	2.00

Table L-14

## Location of Annual Field Bivouac for AFLC

Bivouac	Bases	
	Number	Percent
On Base	4	80.0
Off Base	1	20.0
Total 5		



Table L-15

## Organizations Which Participate In or Support Bivouac - AFLC

(N = 5 bases) Organization	Participate		Support	
	Number	Percent	Number	Percent
Security Police	4	80.0	2	40.0
Hospital/Medical Center	3	60.0	3	60.0
Disaster Preparedness	2	40.0	1	20.0
Transportation	0	0.0	4	80.0
Supply	1	20.0	2	40.0
Food Services	1	20.0	5	100.0
Explosive Ordnance Det.	0	0.0	2	40.0
Air Force Reserve	0	0.0	0	0.0
Air National Guard	1	20.0	2	40.0
Army	0	0.0	2	40.0
Army Reserve	0	0.0	1	20.0
Army National Guard	1	20.0	1	20.0
Navy	0	0.0	0	0.0
Navy Reserves	0	0.0	0	0.0
Marines	0	0.0	0	0.0
Marine Reserves	0	0.0	0	0.0
Others	1	20.0	1	20.0
3rd Combat Comm. Group				

Table L-16

## Number of Bases With Pime BEEF Team Equipment - AFLC

Team Equipment	N	Bases With Team Equipment	
		Number	Percent
CSS	4	0	0.0
HSTS	5	3	60.0
CF-2 Team kit	5	5	100.0
RRR mini-kit	5	5	100.0

Table L-17

## Percentage Missing From Prime BEEF Team Equipment - AFLC

Team Equipment	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
CSS	13b	4	0.00	0.00	0.00	0.00
HSTS	13c	5	3.67	5.51	10.00	0.00
CF-2 Team Kit	13d	5	0.00	0.00	0.00	0.00
RRR Mini-Kit	13e	5	2.00	4.47	10.00	0.00

Air Force Systems Command

This section presents the descriptive statistics for AFSC. Population statistics is presented first, followed by statistics of Home Station training and Prime BEEF team equipment. AFSC's data did not contain any outlier values.

Table L-18

## AFSC Population Data

(Population = 4)	Survey Question Number	Number
Bases which responded	1	4
Respondents which have CF or PB 1, 2, or 3 teams	2	4
AFSC survey return rate = 75.0%		

Table L-19

## RRR Training Times - AFSC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	3a	3	5.00	2.65	8.00	3.00
Lecture/Demonst.	3b1	3	1.00	0.87	2.00	0.50
Films	3b2	3	1.00	0.87	2.00	0.50
Hands-on	3b3	3	3.00	1.00	4.00	2.00
Other	3b4	3	0.00	0.00	0.00	0.00

Table L-20

## Weapons Training Times - AFSC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	4a	3	5.33	2.31	8.00	4.00
Lecture/Demonst.	4b1	3	2.25	1.64	4.00	0.75
Films	4b2	3	0.08	0.14	0.25	0.00
Hands-on	4b3	3	3.00	1.00	4.00	2.00
Other	4b4	3	0.00	0.00	0.00	0.00

Table L-21

## Military Sanitation Training Times - AFSC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	5a	3	2.33	1.53	4.00	1.00
Lecture/Demonst.	5b1	3	1.00	0.87	2.00	0.50
Films	5b2	3	1.00	0.87	2.00	0.50
Hands-on	5b3	3	0.33	0.58	1.00	0.00
Other	5b4	3	0.00	0.00	0.00	0.00

Table L-22

## Expedient Repair Training Times - AFSC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	6a	3	2.83	1.44	4.50	2.00
Lecture/Demonst.	6b1	3	1.33	0.58	2.00	1.00
Films	6b2	3	0.50	0.50	1.00	0.00
Hands-on	6b3	3	1.00	1.73	3.00	0.00
Other	6b4	3	0.00	0.00	0.00	0.00

Table L-23

## Explosive Ordnance Reconnaissance Training Times - AFSC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	7a	3	1.50	0.50	2.00	1.00
Lecture/Demonst.	7b1	3	0.50	0.50	1.00	0.00
Films	7b2	3	0.67	0.29	1.00	0.50
Hands-on	7b3	3	0.00	0.00	0.00	0.00
Other	7b4	3	0.33	0.58	1.00	0.00

Other = EOD personnel provide demonstration

Table L-24

## Chemical Warfare Training Times - AFSC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	8a	3	5.00	2.65	8.00	3.00
Lecture/Demonst.	8b1	3	2.50	1.32	4.00	1.50
Film	8b2	3	1.00	1.00	2.00	0.00
Hands-on	8b3	3	0.83	1.04	2.00	0.00
Other	8b4	3	0.67	1.15	2.00	0.00

Other = task qualification training

Table L-25

## Personal, Convoy, and Work Party Training Times - AFSC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	9a	3	4.50	3.04	8.00	2.50
Lecture/Demonst.	9b1	3	1.33	0.58	2.00	1.00
Film	9b2	3	1.50	0.87	2.00	0.50
Hands-on	9b3	3	1.67	2.08	4.00	0.00
Other	9b4	3	0.00	0.00	0.00	0.00

Table L-26

## Vehicle Training Times for Equipment Operators - AFSC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10a	1	2.00	0.00	2.00	2.00
Lecture/Demonst.	10b1	1	0.50	0.00	0.50	0.50
Film	10b2	1	0.00	0.00	0.00	0.00
Hands-on	10b3	1	1.50	0.00	1.50	1.50
Other	10b4	1	0.00	0.00	0.00	0.00

Table L-27

## Vehicle Training Times for Nonequipment Operators - AFSC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10c	1	1.00	0.00	1.00	1.00
Lecture/Demonst.	10d1	1	0.00	0.00	0.00	0.00
Film	10d2	1	0.00	0.00	0.00	0.00
Hands-on	10d3	1	1.00	0.00	1.00	1.00
Other	10d4	1	0.00	0.00	0.00	0.00

Table L-28

## WRM Field Equipment Training Times - AFSC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	11a	3	1.50	2.18	4.00	0.00
Lecture/Demonst.	11b1	3	0.33	0.58	1.00	0.00
Film	11b2	3	0.17	0.29	0.50	0.00
Hands-on	11b3	3	1.00	1.73	3.00	0.00
Other	11b4	3	0.00	0.00	0.00	0.00

Table L-29

## Summation of Training Times - AFSC

Training Times (hours)	N	Mean	Standard Deviation	Maximum	Minimum
Summation Total	3	28.33	8.08	37.00	21.00
Summation Lecture/Demon.	3	10.25	3.75	14.00	6.50
Summation Film	3	5.92	1.88	7.75	4.00
Summation Hands-on	3	11.17	3.33	15.00	9.00
Summation Other	3	1.00	1.00	2.00	0.00

Table L-30

## Days Spent on Bivouac - AFSC

	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Days on Bivouac	12a	3	1.67	1.53	3.00	0.00

Table L-31

## Location of Annual Field Bivouac - AFSC

Bivouac	Bases	
	Number	Percent
On Base	1	50.0
Off Base	1	50.0
Total		2



Table L-32

## Organizations Which Participate In or Support Bivouac - AFSC

(N = 5 bases) Organization	Participate		Support	
	Number	Percent	Number	Percent
Security Police	1	33.3	1	33.3
Hospital/Medical Center	1	33.3	0	0.0
Disaster Preparedness	2	66.7	2	66.7
Transportation	0	0.0	1	33.3
Supply	0	0.0	1	33.3
Food Services	0	0.0	1	33.3
Explosive Ordnance Det.	1	33.3	1	33.3
Air Force Reserve	0	0.0	0	0.0
Air National Guard	0	0.0	0	0.0
Army	0	0.0	0	0.0
Army Reserve	0	0.0	0	0.0
Army National Guard	0	0.0	0	0.0
Navy	0	0.0	0	0.0
Navy Reserves	0	0.0	0	0.0
Marines	0	0.0	0	0.0
Marine Reserves	0	0.0	0	0.0
Others	0	0.0	0	0.0

Table L-33

## Number of Bases With Prime BEEF Team Equipment - AFSC

Team Equipment	N	Bases With Team Equipment	
		Number	Percent
CSS	3	2	66.7
HSTS	2	1	50.0
CF-2 Team kit	3	3	100.0
RRR mini-kit	3	3	100.0

Table L-34

## Percentage Missing From Prime BEEF Team Equipment - AFSC

Team Equipment	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
CSS	13b	2	30.00	42.43	60.00	0.00
HSTS	13c	1	100.00	0.00	100.00	100.00
CF-2 Team Kit	13d	3	32.33	56.00	97.00	0.00
RRR Mini-Kit	13e	3	0.00	0.00	0.00	0.00

Air Training Command

This section presents the descriptive statistics for ATC. Population statistics is presented first, followed by statistics of Home Station training and Prime BEEF team equipment. ATC's data did not contain any outlier values.

Table L-35

## ATC Population Data

(Population = 11)	Survey Question Number	Number
Bases which responded	1	10
Respondents which have CF or PB 1, 2, or 3 teams	2	10
ATC survey return rate = 90.9%		

Table L-36

## RRR Training Times - ATC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	3a	10	4.33	1.91	8.00	2.00
Lecture/Demonst.	3b1	10	0.91	0.65	2.00	0.00
Films	3b2	10	0.66	0.58	2.00	0.00
Hands-on	3b3	10	2.57	1.52	5.00	1.00
Other	3b4	10	0.20	0.63	2.00	0.00

Other = exercise similar to Field 4 at Eglin

Table L-37

## Weapons Training Times - ATC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	4a	10	16.00	30.97	104.00	3.00
Lecture/Demonst.	4b1	10	3.10	1.85	7.00	1.00
Films	4b2	10	0.10	0.32	1.00	0.00
Hands-on	4b3	10	12.70	29.34	96.00	0.00
Other	4b4	10	0.10	0.32	1.00	0.00

Other = not specified

Table L-38

## Military Sanitation Training Times - ATC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	5a	10	2.32	1.40	5.00	0.75
Lecture/Demonst.	5b1	10	1.35	1.16	4.00	0.00
Films	5b2	10	0.47	0.65	2.00	0.00
Hands-on	5b3	10	0.50	1.27	4.00	0.00
Other	5b4	10	0.00	0.00	0.00	0.00

Table L-39

## Expedient Repair Training Times - ATC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	6a	10	4.65	6.15	21.00	0.50
Lecture/Demonst.	6b1	10	1.40	1.07	4.00	0.50
Films	6b2	10	0.25	0.63	2.00	0.00
Hands-on	6b3	10	3.00	6.15	20.00	0.00
Other	6b4	10	0.00	0.00	0.00	0.00

Table L-40

## Explosive Ordnance Reconnaissance Training Times - ATC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	7a	10	1.98	1.04	4.00	1.00
Lecture/Demonst.	7b1	10	1.00	1.20	4.00	0.00
Films	7b2	10	0.45	0.50	1.50	0.00
Hands-on	7b3	10	0.53	0.73	1.83	0.00
Other	7b4	10	0.00	0.00	0.00	0.00

Table L-41

## Chemical Warfare Training Times - ATC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	8a	10	6.95	1.65	10.50	4.96
Lecture/Demonst.	8b1	10	2.66	0.83	4.00	1.63
Film	8b2	10	0.60	0.81	2.00	0.00
Hands-on	8b3	10	3.48	1.63	7.50	2.00
Other	8b4	10	0.20	0.63	2.00	0.00

Other = task qualification training

Table L-42

## Personal, Convoy, and Work Party Training Times - ATC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	9a	10	7.55	5.04	16.00	1.50
Lecture/Demonst.	9b1	10	2.70	1.81	6.00	0.00
Film	9b2	10	0.25	0.63	2.00	0.00
Hands-on	9b3	10	4.60	4.03	12.00	0.00
Other	9b4	10	0.00	0.00	0.00	0.00

Table L-43

## Vehicle Training Times for Equipment Operators - ATC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10a	10	44.60	130.54	416.00	0.00
Lecture/Demonst.	10b1	10	10.43	31.48	100.00	0.00
Film	10b2	10	0.25	0.63	2.00	0.00
Hands-on	10b3	10	33.92	99.14	316.00	0.00
Other	10b4	10	0.00	0.00	0.00	0.00

Table L-44

## Vehicle Training Times for Nonequipment Operators - ATC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10c	9	9.02	19.28	60.00	0.00
Lecture/Demonst.	10d1	9	3.74	9.87	30.00	0.00
Film	10d2	9	0.28	0.67	2.00	0.00
Hands-on	10d3	9	5.00	9.63	30.00	0.00
Other	10d4	1	0.00	0.00	0.00	0.00

Table L-45

## WRM Field Equipment Training Times - ATC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	11a	8	1.44	3.50	10.00	0.00
Lecture/Demonst.	11b1	8	0.31	0.70	2.00	0.00
Film	11b2	8	0.12	0.35	1.00	0.00
Hands-on	11b3	8	1.00	2.83	8.00	0.00
Other	11b4	8	0.00	0.00	0.00	0.00

Table L-46

## Summation of Training Times - ATC

Training Times (hours)	N	Mean	Standard Deviation	Maximum	Minimum
Summation Total	10	53.05	36.13	134.00	19.25
Summation Lecture/Demon.	10	16.74	10.84	45.50	9.50
Summation Film	10	3.13	2.22	7.00	0.00
Summation Hands-on	10	32.68	31.85	112.00	3.00
Summation Other	10	0.50	1.27	4.00	0.00

Table L-47

## Days Spent on Bivouac - ATC

	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Days on Bivouac	12a	10	4.500	3.72	14.00	0.00

Table L-48

## Location of Annual Field Bivouac - ATC

Bivouac	Bases	
	Number	Percent
On Base	5	50.0
Off Base	5	50.0
Total		10



Table L-49

## Organizations Which Participate In or Support Bivouac - ATC

(N = 10 Bases) Organization	Participate		Support	
	Number	Percent	Number	Percent
Security Police	7	70.0	6	60.0
Hospital/Medical Center	3	30.0	5	50.0
Disaster Preparedness	7	70.0	6	60.0
Transportation	1	10.0	8	80.0
Supply	0	0.0	6	60.0
Food Services	0	0.0	7	70.0
Explosive Ordnance Det.	2	20.0	1	10.0
Air Force Reserve	1	10.0	2	20.0
Air National Guard	1	10.0	1	10.0
Army	1	10.0	1	10.0
Army Reserve	1	10.0	1	10.0
Army National Guard	2	20.0	4	40.0
Navy	0	0.0	1	10.0
Navy Reserves	0	0.0	1	10.0
Marines	0	0.0	0	0.0
Marine Reserves	1	10.0	1	10.0
Others	2	20.0	3	30.0
Others who participate		Others who support		
WARSKILLS		USAF Academy CWIT		
Small Arms Training Det.		Small Arms Training Det.		
		National Park Service		

Table L-50

## Number of Bases With Prime BEEF Team Equipment - ATC

Team Equipment	N	Bases With Team Equipment	
		Number	Percent
CSS	10	1	10.0
HSTS	9	8	88.9
CF-2 Team kit	10	9	90.0
RRR mini-kit	10	9	90.0

Table L-51

## Percentage Missing From Prime BEEF Team Equipment - ATC

Team Equipment	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
CSS	13b	1	0.00	0.00	0.00	0.00
HSTS	13c	8	16.25	21.17	50.00	0.00
CF-2 Team Kit	13d	9	5.00	9.58	30.00	0.00
RRR Mini-Kit	13e	9	17.78	32.41	100.0	0.00

Military Airlift Command

This section presents the descriptive statistics for MAC. Population statistics are presented first, followed by statistics of Home Station training and Prime BEEF team equipment. MAC's responses to questions 5b3, 5b4, 6b1, 6b2, 6b4, 10b1, and 10b3 contained outlier values. The statistics for these questions (variables), along with the statistics for the summation variables, are presented with and without the outlier values.

Table L-52

## MAC Population Data

(Population = 14)	Survey Question Number	Number
Bases which responded	1	13
Respondents which have CF or PB 1, 2, or 3 teams	2	13
MAC survey return rate = 92.9%		

Table L-53

## RRR Training Times - MAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	3a	13	5.26	5.15	16.00	1.00
Lecture/Demonst.	3b1	13	1.08	0.94	3.00	0.00
Films	3b2	13	0.66	0.55	2.00	0.00
Hands-on	3b3	13	3.52	4.15	12.00	0.00
Other	3b4	13	0.00	0.00	0.00	0.00

Table L-54

## Weapons Training Times - MAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	4a	13	6.58	6.30	27.00	4.00
Without Outlier		12	4.87	1.48	8.00	4.00
Lecture/Demonst.	4b1	13	1.73	1.20	4.00	0.00
Films	4b2	13	0.35	0.86	3.00	0.00
Without Outlier		12	0.12	0.31	1.00	0.00
Hands-on	4b3	13	4.58	6.56	26.00	1.00
Without Outlier		12	2.79	1.30	6.00	1.00
Other	4b4	13	0.00	0.00	0.00	0.00

Table L-55

## Military Sanitation Training Times - MAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	5a	13	1.73	1.27	4.00	0.00
Lecture/Demonst.	5b1	13	1.23	1.28	4.00	0.00
Films	5b2	13	0.38	0.46	1.00	0.00
Hands-on	5b3	13	0.04	0.14	0.50	0.00
Without Outlier		12	0.00	0.00	0.00	0.00
Other	5b4	13	0.08	0.28	1.00	0.00
Without Outlier		12	0.00	0.00	0.00	0.00

Other = locally produced video

Table L-56

## Expedient Repair Training Times - MAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	6a	13	3.85	3.13	10.00	0.00
Lecture/Demonst.	6b1	13	1.15	0.99	4.00	0.00
Without Outlier		12	0.92	0.51	2.00	0.00
Films	6b2	13	0.08	0.28	1.00	0.00
Without Outlier		12	0.00	0.00	0.00	0.00
Hands-on	6b3	13	2.54	3.26	10.00	0.00
Other	6b4	13	0.08	0.28	1.00	0.00
Without Outlier		12	0.00	0.00	0.00	0.00

Other = locally produced slides

Table L-57

## Explosive Ordnance Reconnaissance Training Times - MAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	7a	13	1.65	0.85	4.00	0.50
Lecture/Demonst.	7b1	13	0.96	1.03	4.00	0.00
Films	7b2	13	0.42	0.45	1.00	0.00
Hands-on	7b3	13	0.27	0.44	1.00	0.00
Other	7b4	13	0.00	0.00	0.00	0.00

Table L-58

## Chemical Warfare Training Times - MAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	8a	12	6.96	2.70	12.50	4.00
Lecture/Demonst.	8b1	12	3.37	2.18	8.00	0.00
Film	8b2	12	0.79	0.94	3.00	0.00
Hands-on	8b3	12	2.75	1.59	6.00	0.50
Other	8b4	12	0.04	0.14	0.50	0.00
Without Outlier		11	0.00	0.00	0.00	0.00

Other = locally produced video

Table L-59

## Personal, Convoy, and Work Party Training Times - MAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	9a	13	4.31	2.81	10.00	1.00
Lecture/Demonst.	9b1	13	1.00	0.46	2.00	0.00
Film	9b2	13	0.15	0.38	1.00	0.00
Hands-on	9b3	13	3.15	2.57	8.00	0.00
Other	9b4	13	0.00	0.00	0.00	0.00

Table L-60

## Vehicle Training Times for Equipment Operators - MAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10a	12	10.29	27.38	96.00	0.00
Without Outlier		11	2.50	4.81	16.00	0.00
Lecture/Demonst.	10b1	12	0.42	1.16	4.00	0.00
Without Outlier		11	0.09	0.30	1.00	0.00
Film	10b2	12	0.00	0.00	0.00	0.00
Hands-on	10b3	12	9.87	27.34	96.00	0.00
Without Outlier		11	2.04	3.64	12.00	0.00
Other	10b4	12	0.00	0.00	0.00	0.00

Table L-61

## Vehicle Training Times for Nonequipment Operators - MAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10c	11	1.95	2.49	7.00	0.00
Lecture/Demonst.	10d1	11	0.54	1.06	3.50	0.00
Film	10d2	11	0.00	0.00	0.00	0.00
Hands-on	10d3	11	1.41	1.76	4.50	0.00
Other	10d4	11	0.00	0.00	0.00	0.00

Table L-62

## WRM Field Equipment Training Times - MAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	11a	12	1.00	1.23	3.00	0.00
Lecture/Demonst.	11b1	12	0.25	0.45	1.00	0.00
Film	11b2	12	0.42	0.79	2.00	0.00
Hands-on	11b3	12	0.33	0.78	2.00	0.00
Other	11b4	12	0.00	0.00	0.00	0.00

Table L-63

## Summation of Training Times - MAC

Training Times (hours)	N	Mean	Standard Deviation	Maximum	Minimum
Summation Total	13	32.37	12.97	57.50	15.00
Without Outliers	13*	30.30	10.54	522.00	15.00
Summation Lecture/Demon.	13	10.96	5.79	21.50	0.00
Without Outliers	13*	10.65	5.42	21.50	0.00
Summation Film	13	3.16	2.15	7.50	0.00
Without Outliers	13*	2.86	2.22	7.50	0.00
Summation Hands-on	13	18.13	8.96	39.00	7.00
Without Outliers	13*	16.10	6.51	27.50	7.00
Summation Other	13	0.19	0.48	1.50	0.00
Without Outliers	13*	0.00	0.00	0.00	0.00

Table L-64

## Days Spent on Bivouac - MAC

	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Days on Bivouac	12a	13	3.19	1.60	5.00	1.00

\* The summation "N" value does not change because outliers were removed from the individual questions which comprised the summation variables. For a more expanded explanation see chapter III.



Table L-65

## Location of Annual Field Bivouac - MAC

Bivouac	Bases	
	Number	Percent
On Base	6	46.2
Off Base	5	38.5
On and Off Base	<u>2</u>	15.4
Total 13		

Table L-66

## Organizations Which Participate In or Support Bivouac - MAC

(N = 13 Bases) Organization	Participate		Support	
	Number	Percent	Number	Percent
Security Police	8	61.5	6	46.2
Hospital/Medical Center	3	23.1	8	61.5
Disaster Preparedness	1	7.7	5	38.5
Transportation	0	0.0	7	53.8
Supply	0	0.0	7	53.8
Food Services	10	76.9	8	61.5
Explosive Ordnance Det.	2	15.4	6	46.2
Air Force Reserve	0	0.0	3	23.1
Air National Guard	0	0.0	1	7.7
Army	1	7.7	5	38.5
Army Reserve	0	0.0	2	15.4
Army National Guard	0	0.0	3	23.1
Navy	0	0.0	0	0.0
Navy Reserves	0	0.0	0	0.0
Marines	0	0.0	0	0.0
Marine Reserves	1	7.7	1	7.7
Others	0	0.0	0	0.0

Table L-67

## Number of Bases With Prime BEEF Team Equipment - MAC

Team Equipment	N	Bases With Team Equipment	
		Number	Percent
CSS	13	4	30.8
HSTS	13	7	53.8
CF-2 Team kit	12	12	100.0
RRR mini-kit	13	13	100.0

Table L-68

## Percentage Missing From Prime BEEF Team Equipment - MAC

Team Equipment	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
CSS	13b	4	4.87	3.97	10.00	1.50
HSTS	13c	7	26.00	27.09	75.00	0.00
CF-2 Team Kit Without Outlier	13d	12	8.61	27.29	95.00	0.00
		11	0.75	2.19	7.30	0.00
RRR Mini-Kit	13e	13	7.31	13.01	40.00	0.00

Strategic Air Command

This section presents the descriptive statistics for SAC. Population statistics are presented first, followed by statistics of Home Station training and team equipment. SAC's responses to questions 3b4, 4b2, 4b3, 5b1, 5b4, 6a, 6b3, 7a, 9a, 9b3, 10a, 10b1, 10b2, 10b3, 10d1, 10d2, 10d3, 11a, and 11b3 contained outlier values. The statistics for these questions (variables), along with the statistics for the summation variables, are presented with and without the outlier values.

Table L-69

## SAC Population Data

(Population = 24)	Survey Question Number	Number
Bases which responded	1	23
Respondents which have CF or PB 1, 2, or 3 teams	2	23
SAC survey return rate = 95.8%		

Table L-70

## RRR Training Times - SAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	3a	23	8.13	6.25	20.00	2.00
Lecture/Demonst.	3b1	23	1.66	1.38	5.00	0.00
Films	3b2	23	1.50	1.51	5.00	0.00
Hands-on	3b3	23	4.84	4.40	16.00	0.00
Other	3b4	23	0.13	0.46	2.00	0.00
Without Outlier		22	0.04	0.21	1.00	0.00
Others = locally produced overhead slides and sound-on-slides						

Table L-71

## Weapons Training Times - SAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	4a	23	7.11	5.76	32.00	1.00
Without Outlier		22	5.98	1.97	10.00	1.00
Lecture/Demonst.	4b1	23	2.41	1.42	6.00	0.00
Films	4b2	23	0.20	0.49	2.00	0.00
Without Outlier		22	0.11	0.31	1.00	0.00
Hands-on	4b3	23	4.50	4.31	28.00	1.00
Without Outlier		22	3.43	1.44	8.00	1.00
Other	4b4	13	0.00	0.00	0.00	0.00

Table L-72

## Military Sanitation Training Times - SAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	5a	23	4.70	4.58	18.00	0.50
Lecture/Demonst.	5b1	23	1.51	1.10	5.00	0.00
Without Outlier		22	1.35	0.82	3.00	0.00
Films	5b2	23	0.72	0.79	2.50	0.00
Hands-on	5b3	23	1.78	2.58	8.00	0.00
Other	5b4	23	0.70	3.34	16.00	0.00
Without Outlier		22	0.00	0.00	0.00	0.00

Other = not stated on survey

Table L-73

## Expedient Repair Training Times - SAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	6a	23	6.06	7.74	30.00	1.00
Without Outlier		22	4.98	5.85	24.00	1.00
Lecture/Demonst.	6b1	23	1.09	0.84	2.50	0.00
Films	6b2	23	0.63	0.77	2.50	0.00
Hands-on	6b3	23	4.34	7.21	27.00	0.00
Without Outlier		22	3.31	5.37	20.00	0.00
Other	6b4	23	0.00	0.00	0.00	0.00

Table L-74

## Explosive Ordnance Reconnaissance Training Times - SAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	7a	23	2.37	2.14	10.00	0.50
Without Outlier		22	2.02	1.38	5.00	0.50
Lecture/Demonst.	7b1	23	1.04	0.95	3.00	0.00
Films	7b2	23	0.65	0.74	2.50	0.00
Hands-on	7b3	23	0.67	1.39	5.00	0.00
Without Outlier		22	0.48	1.05	4.00	0.00
Other	7b4	23	0.00	0.00	0.00	0.00

Table L-75

## Chemical Warfare Training Times - SAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	8a	23	10.52	3.87	20.00	4.00
Lecture/Demonst.	8b1	23	3.72	1.70	8.00	1.00
Film	8b2	23	0.63	0.83	2.50	0.00
Hands-on	8b3	23	6.17	2.96	12.00	1.00
Other	8b4	23	0.00	0.00	0.00	0.00

Table L-76

## Personal, Convoy, and Work Party Training Times - SAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	9a	23	12.59	15.31	75.00	0.00
Without Outlier		22	9.75	7.18	4.00	0.00
Lecture/Demonst.	9b1	23	2.10	1.17	4.00	0.00
Film	9b2	23	0.58	0.82	2.50	0.00
Hands-on	9b3	23	9.84	14.85	72.00	0.00
Without Outlier		22	7.02	6.23	20.00	0.00
Other	9b4	23	0.00	0.00	0.00	0.00

Table L-77

## Vehicle Training Times for Equipment Operators - SAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10a	21	7.07	10.75	40.00	0.00
Without Outlier		20	5.42	7.85	28.00	0.00
Lecture/Demonst.	10b1	21	0.67	1.39	6.00	0.00
Without Outlier		20	0.40	0.68	2.00	0.00
Film	10b2	21	2.05	6.55	30.00	0.00
Without Outlier		20	0.65	1.42	6.00	0.00
Hands-on	10b3	21	5.79	9.58	38.00	0.00
Without Outlier		20	4.17	6.26	20.00	0.00
Other	10b4	12	0.00	0.00	0.00	0.00

Table L-78

## Vehicle Training Times for Nonequipment Operators - SAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10c	19	3.35	4.83	16.00	0.00
Lecture/Demonst.	10d1	19	0.87	2.22	8.00	0.00
Without Outlier		18	0.47	1.44	6.00	0.00
Film	10d2	19	0.53	1.43	6.00	0.00
Without Outlier		18	0.22	0.55	2.00	0.00
Hands-on	10d3	19	1.95	3.63	14.00	0.00
Without Outlier		18	1.29	2.22	9.00	0.00
Other	10d4	19	0.00	0.00	0.00	0.00

Table L-79

## WRM Field Equipment Training Times - SAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	11a	21	3.58	7.17	30.00	0.00
Without Outlier		20	2.26	3.95	16.00	0.00
Lecture/Demonst.	11b1	21	0.54	0.73	2.50	0.00
Film	11b2	21	0.43	0.79	2.50	0.00
Hands-on	11b3	21	2.62	6.01	25.00	0.00
Without Outlier		20	1.50	3.22	12.00	0.00
Other	11b4	12	0.00	0.00	0.00	0.00

Table L-80

## Summation of Training Times - SAC

Training Times (hours)	N	Mean	Standard Deviation	Maximum	Minimum
Summation Total	23	57.53	29.92	128.00	18.50
Without Outliers	23*	49.83	21.28	89.00	18.50
Summation Lecture/Demon.	23	14.74	5.46	23.00	5.00
Without Outliers	23*	14.18	5.49	23.00	5.00
Summation Film	23	5.73	5.49	20.00	0.00
Without Outliers	23*	5.38	5.01	20.00	0.00
Summation Hands-on	23	36.16	23.74	93.00	7.00
Without Outliers	23*	28.72	14.35	53.50	7.00
Summation Other	23	0.83	3.75	18.00	0.00
Without Outliers	13*	0.00	0.00	0.00	0.00

\* The summation "N" value does not change because outliers were removed from the individual questions which comprised the summation variables. For a more expanded explanation see chapter 111.



Table L-81

## Organizations Which Participate In or Support Bivouac - SAC

(N = 23 Bases) Organization	Participate		Support	
	Number	Percent	Number	Percent
Security Police	16	69.6	12	52.2
Hospital/Medical Center	9	39.1	15	65.2
Disaster Preparedness	6	26.1	10	43.5
Transportation	4	17.4	17	79.3
Supply	2	8.7	8	34.8
Food Services	20	87.0	17	73.9
Explosive Ordnance Det.	2	8.7	6	26.1
Air Force Reserve	2	8.7	4	17.4
Air National Guard	2	8.7	8	34.8
Army	0	0.0	3	13.0
Army Reserve	1	4.3	7	30.4
Army National Guard	3	13.0	8	34.8
Navy	0	0.0	0	0.0
Navy Reserves	0	0.0	0	0.0
Marines	0	0.0	0	0.0
Marine Reserves	0	0.0	0	0.0
Others	1	4.3	3	13.0
Others who participate CATMU, base level			Others who support * Local Police FEMA Parks Department Girl Scouts	

Table L-82

## Days Spent on Bivouac - SAC

	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Days on Bivouac	12a	23	3.82	1.33	7.00	2.00

\* One base reported two groups which supported their bivouac. This explains the why the numerical value in the table is 3 and four organizations are listed.

Table L-83

## Location of Annual Field Bivouac - SAC

Bivouac	Number	Bases
		Percent
On Base	13	56.5
Off Base	3	13.0
On and Off Base	<u>7</u>	30.4
Total		23

Table L-84

## Number of Bases With Prime BEEF Team Equipment - SAC

Team Equipment	N	Bases With Team Equipment	
		Number	Percent
CSS	21	21	100.0
HSTS	22	4	18.2
CF-2 Team Kit	23	23	100.0
RRR mini-kit	22	22	100.0

Table L-85

## Percentage Missing From Prime BEEF Team Equipment - SAC

Team Equipment	Survey	N	Mean	Standard Deviation	Maximum	Minimum
	Question Number					
CSS	13b	21	27.43	22.63	80.00	0.00
HSTS	13c	4	8.75	10.31	20.00	0.00
CF-2 Team Kit	13d	23	5.22	20.27	98.00	0.00
RRR Mini-Kit	13e	22	16.27	23.31	90.00	0.00
Without Outlier		21	12.76	16.90	70.00	0.00

### Tactical Air Command

This section presents the descriptive statistics for TAC. Population statistics are presented first, followed by statistics of Home Station training and team equipment. TAC's responses to questions 3a, 3b3, 4a, 4b2, 4b3, 5b2, 6b2, 8b3, 8b4, 9b3, 10a, 10b1, 10b4, and 10c through 11b3 contained outlier values. The statistics for these questions (variables), along with the summation variables, are presented with and without the outlier values.

Table L-86

#### TAC Population Data

(Population = 17)	Survey Question Number	Number
Bases which responded	1	17
Respondents which have CF or PB 1, 2, or 3 teams	2	17

TAC survey return rate = 100%

Table L-87

#### RRR Training Times - TAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	3a	16	12.06	11.70	48.00	1.00
Without Outlier		15	9.67	6.96	30.00	1.00
Lecture/Demonst.	3b1	16	2.03	2.00	8.00	0.00
Films	3b2	16	1.11	1.32	4.00	0.00
Hands-on	3b3	16	8.92	9.91	40.00	0.67
Without Outlier		15	6.84	5.63	22.00	0.67
Other	3b4	16	0.00	0.00	0.00	0.00

Table L-88

## Weapons Training Times - TAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	4a	17	9.47	9.70	45.00	3.00
Without Outlier		16	7.25	3.30	17.00	3.00
Lecture/Demonst.	4b1	17	2.71	1.50	5.00	0.00
Films	4b2	17	0.23	0.56	2.00	0.00
Without Outlier		16	0.12	0.34	1.00	0.00
Hands-on	4b3	17	6.53	9.14	40.00	1.50
Without Outlier		16	4.44	3.12	14.00	1.50
Other	4b4	13	0.00	0.00	0.00	0.00

Table L-89

## Military Sanitation Training Times - TAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	5a	17	4.26	5.23	16.00	0.25
Lecture/Demonst.	5b1	17	1.40	1.23	4.00	0.00
Films	5b2	17	0.69	0.97	4.00	0.00
Without Outlier		16	0.48	0.47	1.00	0.00
Hands-on	5b3	17	2.18	3.84	12.00	0.00
Other	5b4	17	0.00	0.00	0.00	0.00

Table L-90

## Expedient Repair Training Times - TAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	6a	17	6.44	7.07	25.00	0.50
Lecture/Demonst.	6b1	17	1.38	1.12	4.00	0.00
Films	6b2	17	0.21	0.53	2.00	0.00
Without Outlier		16	0.09	0.27	1.00	0.00
Hands-on	6b3	17	4.85	6.93	24.00	0.00
Other	6b4	23	0.00	0.00	0.00	0.00

Table L-91

## Explosive Ordnance Reconnaissance Training Times - TAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	7a	17	5.36	5.38	16.00	0.40
Lecture/Demonst.	7b1	17	1.21	1.31	4.00	0.00
Films	7b2	17	0.89	1.43	5.00	0.00
Hands-on	7b3	17	3.15	4.35	12.00	0.00
Other	7b4	23	0.00	0.00	0.00	0.00

Table L-92

## Chemical Warfare Training Times - TAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	8a	17	13.12	10.96	44.00	2.00
Lecture/Demonst.	8b1	17	3.29	1.61	6.00	0.00
Film	8b2	17	0.65	0.86	2.00	0.00
Hands-on	8b3	17	9.12	10.26	40.00	0.00
Without Outlier		16	7.19	6.68	20.00	0.00
Other	8b4	17	0.06	0.24	1.00	0.00
Without Outlier		16	0.00	0.00	0.00	0.00

Other = decontamination practice

Table L-93

## Personal, Convoy, and Work Party Training Times - TAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	9a	17	16.53	35.61	150.00	0.00
Without Outlier		16	8.19	9.52	40.00	0.00
Lecture/Demonst.	9b1	17	2.21	2.04	8.00	0.00
Film	9b2	17	0.76	1.60	5.00	0.00
Hands-on	9b3	17	13.56	33.42	140.00	0.00
Without Outlier		16	5.66	7.68	32.00	0.00
Other	9b4	17	0.00	0.00	0.00	0.00

Table L-94

## Vehicle Training Times for Equipment Operators - TAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10a	16	11.69	19.82	72.00	0.00
Without Outlier		15	7.67	11.98	48.00	0.00
Lecture/Demonst.	10b1	16	1.12	2.19	8.00	0.00
Without Outlier		15	0.67	1.23	4.00	0.00
Film	10b2	16	0.50	1.03	3.00	0.00
Hands-on	10b3	16	9.97	17.33	61.00	0.00
Other	10b4	16	0.09	0.27	1.00	0.00
Without Outlier		15	0.03	0.13	0.50	0.00

Other = wearing gas mask while training

Table L-95

## Vehicle Training Times for Nonequipment Operators - TAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10c	17	2.91	4.29	16.00	0.00
Without Outlier		16	2.09	2.75	11.00	0.00
Lecture/Demonst.	10d1	17	1.03	2.06	8.00	0.00
Without Outlier		16	0.59	1.05	4.00	0.00
Film	10d2	17	0.35	0.79	3.00	0.00
Without Outlier		16	0.19	0.40	1.00	0.00
Hands-on	10d3	17	1.47	2.90	12.00	0.00
Without Outlier		16	0.81	1.05	4.00	0.00
Other	10d4	17	1.47	2.90	12.00	0.00
Without Outlier		16	0.00	0.00	0.00	0.00

Other = wearing gas mask while training

Table L-96

## WRM Field Equipment Training Times - TAC

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	11a	14	19.50	68.11	256.00	0.00
Without Outlier		13	1.31	2.50	8.00	0.00
Lecture/Demonst.	11b1	14	2.61	9.61	36.00	0.00
Without Outlier		13	0.04	0.14	0.50	0.00
Film	11b2	14	0.07	0.27	1.00	0.00
Without Outlier		13	0.00	0.00	0.00	0.00
Hands-on	11b3	14	16.82	58.52	220.00	0.00
Without Outlier		13	1.119	2.38	8.00	0.00
Other	11b4	14	0.00	0.00	0.00	0.00

Table L-97

## Summation of Training Times - TAC

Training Times (hours)	N	Mean	Standard Deviation	Maximum	Minimum
Summation Total	17	85.50	83.57	297.00	13.34
Without Outliers	17*	55.20	32.70	122.00	13.34
Summation Lecture/Demon.	17	17.28	12.94	55.00	0.00
Without Outliers	17*	14.69	8.60	32.00	0.00
Summation Film	17	4.89	4.93	18.00	0.00
Without Outliers	17*	4.18	4.32	14.00	0.00
Summation Hands-on	17	63.10	71.26	234.00	5.67
Without Outliers	17*	34.16	28.00	97.00	5.67
Summation Other	17	0.12	0.48	2.00	0.00
Without Outliers	17*	0.00	0.00	0.00	0.00

\* The summation "N" value does not change because outliers were removed from the individual questions which comprised the summation variables. For a more expanded explanation see chapter III.



Table L-98

## Days Spent on Bivouac - TAC

	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Days on Bivouac	12a	17	7.41	8.77	36.00	2.00
Without Outliers		16	5.62	1.23	18.00	2.00

Table L-99

## Location of Annual Field Bivouac - TAC

Bivouac	Number	Bases
		Percent
On Base	15	88.2
Off Base	<u>2</u>	11.8
Total 17		

Table L-100

## Organizations Which Participate In or Support Bivouac - TAC

(N = 23 Bases) Organization	Participate		Support	
	Number	Percent	Number	Percent
Security Police	10	58.8	4	23.5
Hospital/Medical Center	6	35.3	9	52.9
Disaster Preparedness	5	29.4	8	47.1
Transportation	1	5.9	13	76.5
Supply	1	5.9	10	58.8
Food Services	7	41.2	8	47.2
Explosive Ordnance Det.	9	52.9	9	52.9
Air Force Reserve	0	0.0	3	17.6
Air National Guard	0	0.0	4	23.5
Army	1	5.9	4	23.5
Army Reserve	0	0.0	6	35.3
Army National Guard	0	0.0	8	47.1
Navy	1	5.9	1	5.9
Navy Reserves	0	0.0	1	5.9
Marines	1	5.9	1	5.9
Marine Reserves	0	0.0	1	5.9
Others	1	5.9	2	11.8
Others who participate U.S. Customs Service		Others who support * Tactical Control Flights Other Bases Local Civil Defense		

Table L-101

## Number of Bases With Prime BEEF Team Equipment - TAC

Team Equipment	N	Bases With Team Equipment	
		Number	Percent
CSS	17	0	0.0
HSTS	17	11	64.7
CF-2 Team Kit	17	17	100.0
RRR mini-kit	17	17	100.0

\* One base reported two groups which supported their bivouac. This explains why the numerical value in the table is 2 and three organizations are listed.

Table L-102

## Percentage Missing From Prime BEEF Team Equipment - TAC

Team Equipment	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
CSS	13b	0				
HSTS	13c	11	15.45	26.11	90.00	0.00
CF-2 Team Kit	13d	17	13.35	31.40	98.00	0.00
RRR Mini-Kit	13e	17	20.00	27.27	80.00	0.00

Other Air Force CONUS Commands

This section presents the descriptive statistics for "Other" CONUS Air Force commands which had only one base. The Other category consists of Space Command, Air University, and the U.S. Air Force Academy. Population statistics are presented first, followed by statistics of Home Station training and Prime BEEF team equipment. The data for this category did not contain any outlier values.

Table L-103

## Other Commands Population Data

(Population = 3)	Survey Question Number	Number
Bases which responded	1	3
Respondents which have CF or PB 1, 2, or 3 teams	2	3
Other Commands survey return rate = 100.0%		

Table L-104

## RRR Training Times - Other Commands

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	3a	3	8.67	4.16	12.00	4.00
Lecture/Demonst.	3b1	3	2.00	2.00	4.00	0.00
Films	3b2	3	2.33	1.53	4.00	1.00
Hands-on	3b3	3	4.33	3.21	8.00	2.00
Other	3b4	3	0.00	0.00	0.00	0.00

Table L-105

## Weapons Training Times - Other Commands

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	4a	3	5.33	2.31	8.00	4.00
Lecture/Demonst.	4b1	3	1.67	0.58	2.00	1.00
Films	4b2	3	0.00	0.00	0.00	0.00
Hands-on	4b3	3	3.67	2.08	6.00	2.00
Other	4b4	3	0.00	0.00	0.00	0.00

Table L-106

## Military Sanitation Training Times - Other Commands

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	5a	3	4.00	2.00	6.00	2.00
Lecture/Demonst.	5b1	3	2.33	2.52	5.00	0.00
Films	5b2	3	0.67	0.58	1.00	0.00
Hands-on	5b3	3	1.00	1.00	2.00	1.00
Other	5b4	3	0.00	0.00	0.00	0.00

Table L-107

## Expedient Repair Training Times - Other Commands

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	6a	3	3.67	3.79	8.00	1.00
Lecture/Demonst.	6b1	3	0.67	0.58	1.00	0.00
Films	6b2	3	0.00	0.00	0.00	0.00
Hands-on	6b3	3	3.00	4.36	8.00	0.00
Other	6b4	3	0.00	0.00	0.00	0.00

Table L-108

## Explosive Ordnance Reconnaissance Training Times - Other Commands

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	7a	3	1.17	0.29	1.50	1.00
Lecture/Demonst.	7b1	3	0.17	0.29	0.50	0.00
Films	7b2	3	1.00	0.00	1.00	1.00
Hands-on	7b3	3	0.00	0.00	0.00	0.00
Other	7b4	3	0.00	0.00	0.00	0.00

Table L-109

## Chemical Warfare Training Times - Other Commands

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	8a	3	8.33	2.52	11.00	6.00
Lecture/Demonst.	8b1	3	2.33	0.58	3.00	2.00
Film	8b2	3	1.67	0.58	2.00	1.00
Hands-on	8b3	3	4.33	2.52	7.00	2.00
Other	8b4	3	0.00	0.00	0.00	0.00

Table L-110

## Personal, Convoy, and Work Party Training Times - Other Commands

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	9a	3	17.33	7.02	24.00	10.00
Lecture/Demonst.	9b1	3	4.33	4.93	10.00	1.00
Film	9b2	3	0.67	1.15	2.00	0.00
Hands-on	9b3	3	12.33	3.51	16.00	9.00
Other	9b4	3	0.00	0.00	0.00	0.00

Table L-111

## Vehicle Training Times for Equipment Operators - Other Commands

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10a	3	2.00	0.58	1.00	0.00
Lecture/Demonst.	10b1	3	0.33	0.58	1.00	0.00
Film	10b2	3	0.00	0.00	0.00	0.00
Hands-on	10b3	3	1.67	2.89	5.00	0.00
Other	10b4	3	0.00	0.00	0.00	0.00

Table L-112

## Vehicle Training Times for Nonequipment Operators - Other Commands

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	10c	3	0.67	1.15	2.00	0.00
Lecture/Demonst.	10d1	3	0.33	0.58	1.00	0.00
Film	10d2	3	0.00	0.00	0.00	0.00
Hands-on	10d3	30	0.33	0.58	1.00	0.00
Other	10d4	3	0.00	0.00	0.00	0.00

Table L-113

## WRM Field Equipment Training Times - Other Commands

Training Times (hours)	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Total	11a	3	1.67	2.08	4.00	0.00
Lecture/Demonst.	11b1	3	0.33	0.58	1.00	0.00
Film	11b2	3	0.33	0.58	1.00	0.00
Hands-on	11b3	3	1.00	1.73	3.00	0.00
Other	11b4	3	0.00	0.00	0.00	0.00



Table L-114

## Summation of Training Times - Other Commands

Training Times (hours)	N	Mean	Standard Deviation	Maximum	Minimum
Summation Total	3	50.83	3.62	55.00	48.50
Summation Lecture/Demon.	3	14.17	5.84	20.50	9.00
Summation Film	3	6.67	0.58	7.00	6.00
Summation Hands-on	3	30.00	7.00	35.00	22.00
Summation Other	3	0.00	0.00	0.00	0.00

Table L-115

## Days Spent on Bivouac - Other Commands

	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
Days on Bivouac	12a	3	3.00	1.00	4.00	2.00

Table L-116

## Location of Annual Field Bivouac - Other Commands

Bivouac	Bases	
	Number	Percent
On Base	3	100.0

Table L-117

## Organizations Which Participate In or Support Bivouac - Other Commands

(N = 3 bases) Organization	Participate		Support	
	Number	Percent	Number	Percent
Security Police	2	66.7	1	33.3
Hospital/Medical Center	0	0.0	1	33.3
Disaster Preparedness	0	0.0	1	33.3
Transportation	1	33.3	3	100.0
Supply	0	0.0	1	33.3
Food Services	0	0.0	2	66.7
Explosive Ordnance Det	0	0.0	0	0.0
Air Force Reserve	0	0.0	1	33.3
Air National Guard	0	0.0	1	33.3
Army	2	66.7	2	66.7
Army Reserve	0	0.0	0	0.0
Army National Guard	0	0.0	0	0.0
Navy	0	0.0	0	0.0
Navy Reserves	0	0.0	0	0.0
Marines	0	0.0	0	0.0
Marine Reserves	0	0.0	0	0.0
Others	0	0.0	1	33.3
Other who supports Cadet Wing				

Table L-118

## Number of Bases With Prime BEEF Team Equipment - Other Commands

Team Equipment	N	Bases With Team Equipment	
		Number	Percent
CSS	2	0	00.0
HSTS	2	1	100.0
CF-2 Team kit	3	3	100.0
RRR mini-kit	3	3	100.0

Table L-119

Percentage Missing From Prime BEEF Team Equipment - Other Commands

Team Equipment	Survey Question Number	N	Mean	Standard Deviation	Maximum	Minimum
CSS	13b	0	0.00	0.00	0.00	0.00
HSTS	13c	1	10.00	0.00	10.00	10.00
CF-2 Team Kit	13d	3	7.00	11.27	20.00	0.00
RRR Mini-Kit	13e	3	4.00	5.29	10.00	0.00

# Appendix M. Points of Contact for Air Force, Army, Navy, and Marine Engineers

## AIR FORCE

Air Force Engineering and Services Center, Tyndall AFB, Florida

LTC WINDHAM	970-6121	DEOP CHIEF OF TRAINING
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CAPT GENE SMITH	970-6129	
SGT TILMAN	970-6129	

## PENTAGON

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HQ, USAF		
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WASHINGTON DC, 20330		
MAJ PAUL MCNICKLE	225-7744	LEEX

## ARMY

Engineer School, Fort Belvoir, Virginia

SFC JOHNSON	354-3008,5470	UNIT TRAINING
MRS EMBREY	354-3008,5470	UNIT TRAINING
LTC BOWE	354-3771	TRNG MGT & SUPPORT
TRAINING & DOCTRINE	354-2188	

## NAVY

Civil Engineer Corp School, PORT HUENE, California

LT GORUM	360-4001	CEC OFFICER SCHOOL
LT DAVE BASILE	360-4731	TNG REQ'S BAT

Seabee Training Center, Gulfport, Mississippi

Mr. LEE FULLER	363-2665	20 NCR
(Mr. Fuller is a very helpful and knowledgeable individual)		

## MARINES

LTC ROTH	224-2544	UNIT EVALUATION
LTC CHARLES	224-8590	TRAINING

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## VITA

Captain Emmitt G. Smith, the son of an Air Force Noncommissioned Officer, was born on 7 June 1953 in Biloxi, Mississippi. He graduated from high school in d'Iberville, Mississippi, in 1971 and attended Mississippi State University from which he received the degree of Bachelor of Science in Civil Engineering in May 1976. After graduation, he received a commission in the U.S. Army through the ROTC program and was called to active duty in September 1976. He completed the Engineer Officers Basic School and was assigned to the 47th Engineer Company (Combat-Heavy) at Fort Wainwright, Alaska where he served as a platoon leader and executive officer. In August 1978, he was transferred to Headquarters Army Armament Readiness Command where he serve as a staff environmental engineer until October 1980 when he resigned his commission in the Army and entered the Air Force. His first assignment with the Air Force was at Keesler AFB where he served as Chief of Readiness and Logistics, Chief of Resources and Requirements, and as OIC of an eight month Prime BEEF Civic Action Team deployment to the Truk Islands. His next assignment, upon leaving the Air Force Institute of Technology, will be to Headquarters Strategic Air Command in October 1984.

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<p>Title: AN EXAMINATION OF THE AIR FORCE CIVIL ENGINEERING'S PRIME BEEF HOME STATION TRAINING PROGRAM</p> <p>Thesis Chairman: Jeff Thomas, Captain, USAF</p> <p>Approved for public release: 1AW AFR 130-17. LYNN E. WOLLAVER 14 Sep 85 Dean for Research and Professional Development Air Force Institute of Technology (ATC) Wright-Patterson AFB OH 45433</p>									
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22a. NAME OF RESPONSIBLE INDIVIDUAL Jeff Thomas, Captain, USAF			22b. TELEPHONE NUMBER (Include Area Code) 513-255-4552		22c. OFFICE SYMBOL AFIT/DET				

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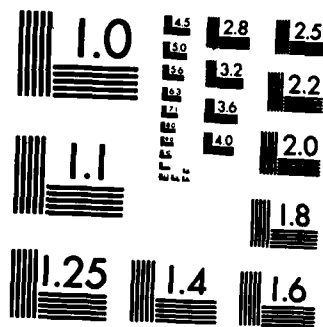
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This investigation examined the Air Force Civil Engineering's Prime BEEF Home Station training program. Specifically, this study determined the amount and methods of Prime BEEF Home Station training being conducted by CONUS and nonCONUS civil engineering units. Also, this study determined the amount of time civil engineering personnel spent in the field during their annual bivouac, and which organizations participate in or support the bivouacs. Furthermore, the study investigated the amount of equipment missing from Prime BEEF team equipment sets. Finally, a review of Air Force regulations, manuals, pamphlets, and reports, which pertain to Home Station training is presented. ↗

The analysis was accomplished by sending a questionnaire to Prime BEEF program managers at all CONUS, AAC, and PACAF bases which had CF-1, CF-2, or CF-3 teams, and USAFE bases which had mobile or RRR teams. The results showed that a CONUS CF-1, CF-2, or CF-3 team member spent an average of 50.23 hours per year training (2.7% of an individual's potentially productive time) in the Home Station training requirements. Also, total annual training times varied widely between bases (from 13.34 hours per year to 393.00 hours per year) and between major Air Force commands (an average of 183.00 hours per year for AFLC to an average of 28.33 hours per year for AFSC). Finally, the results showed that the primary method of instruction used to accomplish Home Station training is "hands-on".

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